

DISTINCTIVE CLOTHES

Library
of the
University of Wisconsin

Feb 17

7 E - 8

DISTINCTIVE CLOTHES

HOW TO SELECT AND MAKE THEM

An Intermediate Course

By

FRANCES H. CONSALUS

CHAIRMAN OF HOME ECONOMICS DEPARTMENT,
WADLEIGH HIGH SCHOOL, NEW YORK CITY

ANNA G. TIGHE

ASSISTANT DIRECTOR OF SEWING,
NEW YORK CITY PUBLIC SCHOOLS

WILLIAM H. DOOLEY

PRINCIPAL OF STRAUBENMÜLLER TEXTILE HIGH SCHOOL,
NEW YORK CITY

MAYER ROHR

INSTRUCTOR IN PATTERN MAKING, TEXTILE EVENING
TRADE AND HIGH SCHOOL, AND IN CHARGE OF PATTERN
DEPARTMENT, MCCALL CORPORATION

THE RONALD PRESS COMPANY
NEW YORK

Copyright, 1940, by
THE RONALD PRESS COMPANY

All Rights Reserved

The text of this publication or any part thereof may not be reproduced in any manner whatsoever without permission in writing from the publisher.

Second Printing, January, 1942

PRINTED IN THE UNITED STATES OF AMERICA

Agrie

RENO
C 76

TT
518
C 78
1942

605725

5468870

LIBRARY
COLLEGE OF AGRICULTURE
UNIVERSITY OF MINNESOTA

PREFACE

This volume aims to give the student a training in the practice and technique of making stylish clothing. It also gives the related technical knowledge in all its phases, so that the student will not only learn practice by imitation, but will think and reason intelligently about the work and be resourceful in making original designs.

In its general objectives and organization of subject matter, this book follows the plan for the second year textile course in the Course of Study and Syllabus in Textile Arts, adopted by the Board of Education in New York City. It covers the topics of a complete technical and vocational intermediate course in clothing in the same way that the companion volume *ATTRACTIVE CLOTHES* covers the first or elementary year.

The authors have received many valuable suggestions on subject matter from teachers of clothing and are especially indebted to Mrs. Mary E. Magrane, director of sewing in the New York City Public Schools, who read the entire manuscript and offered many valuable suggestions. Many of the drawings were made by Miss Mary Gregoris, Miss Katherine Sasso, and Mrs. Florence Wolfe.

The authors will be pleased to receive any constructive criticism.

F. H. C.
A. G. T.
W. H. D.
M. R.

March 13, 1940

CONTENTS

PART I

CHAPTER 1

PAGE

SELECTION OF CLOTHING ADAPTED TO THE INDIVIDUAL IN LINE, DESIGN, AND COLOR, AS APPLIED TO DRESS AND ACCESSORIES	3
---	---

HUMAN FORM. SELF-ANALYSIS OF THE INDIVIDUAL FIGURE:
Classification of Figure. The Model Figure. ANALYSIS OF
FASHION DESIGN: Structural and Decorative Design. Pur-
poses of Dress. Analysis of Fashion Silhouettes. Effects of
Lines on the Figure. PRINCIPLES OF DESIGN: Proportion.
The Principle of Balance Applied to Clothing. Harmony and
Unity. Rhythm. Emphasis in Dress; Center of Interest; or
Subordination. COLOR PRINCIPLES AND THEIR USE IN CLOTHES:
Theory of Color. Hue. Values of Color. Law of Areas.
Color Harmonies. Line Effects. Personal Coloring. Personal
Color Types. CHOICE OF ACCESSORIES: Selection of Accessories.

CHAPTER 2

AN ANALYSIS OF CLOTHING NEEDS	36
---	----

The Value of Being Prepared. To Invoice a Wardrobe. Classi-
fication of Wearing Apparel. Factors Determining the Indi-
vidual Needs for Garments. Classification of Individual Ward-
robes. Standards for Practicing Thrift. Factors Affecting the
Service of Garment. Standards for Judging Materials and
Workmanship. Standards for Buying Fabrics and Garments.
To Judge the Quality of the Construction of a Dress.

CHAPTER 3

SHOPPING	54
--------------------	----

Woman's Responsibility in the Expenditure of the Family
Money. Retail Stores. Department Stores. Relationship
Between Store Personnel and Customer. SHOPPING ETHICS AND
COURTESIES: Shopping Ethics. Ways in Which the Consumer
May Cooperate with the Store and Its Salespeople. Courtesies
Extended by Stores. Relationship of Store to the Community.
Classes of Merchandise. Textile Testing. ADVERTISING: Classi-

	PAGE
fication of Advertising. Evaluation of an Advertisement. Competition. SPECIAL MERCHANDISING DEVICES: To Meet the Demands of the Economic Level of Customers. Cost of Services. Bargain Basements or Departments. Budget Shops. Special Sales. French, Specialty, or Exclusive Shops. SPECIAL STORE SERVICES.	

CHAPTER 4

TEXTILES, JUDGING CHARACTERISTICS, WEAVES AND FINISHES OF KNITTED, WOVEN RAYON AND SILK FABRICS	74
---	----

Analysis of Fibers. Silk Weaves. Ribbons. KNITTED FABRICS: Knitting and Netting. Knitting and Weaving. Various Knitted Goods. Classes of Knitted Fabrics. Glove Silk. Growth of the Knitting Industry. PRODUCTION AND MANUFACTURE OF SILK—SILK FABRICS: Characteristic Treatment of Silk. Numbering Raw Silk. Thrown Silk. Manufacture of Silk Yarns. Making Silk Cloth. Weighting or Loading. Spun Silk. Textile Printing. Manufacture of Velvets. SYNTHETIC AND SILK FABRICS COMPARED—TESTS: Rayon. Characteristics of the Synthetic Fabrics. Comparison of Silk with Rayon. Tests for Silks and the Synthetic Fibers. Factors Influencing Use of Silk. LACE: History. Kinds of Lace.

CHAPTER 5

ADAPTATION OF A COMMERCIAL PATTERN	96
--	----

How Commercial Patterns Are Made. Classification of Sizes. How to Take Measurements. Ease Allowance for Proper Fit. Selecting Suitable Styles—Waists, Necklines, Collars, Shoulder Lines, Body Lines. How to Obtain the Correct Size Pattern. How to Select Appropriate Materials. Altering a Commercial Pattern. Laying Out Material for Cutting. Laying Pattern on the Material. Matching Plaids, Stripes, etc. Pattern Adaptation—Waists, Sleeves, Skirts.

CHAPTER 6

CONSTRUCTION OF AN ENSEMBLE	139
---------------------------------------	-----

Silhouette and Fashion Changes. Fundamental Types (Shapes of Parts) of Construction. Fundamental Structural (Seam) Lines. CONSTRUCTION OF AN ENSEMBLE OR SILK DRESS—SELECTION AND USE OF PATTERN: Choice of Garment. Selection of a Commercial Pattern. Outline to be Followed in Use of Pattern. Grain of Fabric. Testing the Pattern. SELECTION OF FABRIC—CUTTING: Wise Choice of Fabric. Aids in Acquiring

a Professional Appearance in Our Dress Construction. Inspection of Fabric. Preparation of Fabric for Cutting. Laying Fabric in Place. Placing Pattern on Fabric. Precautions to Take in Cutting Out Garment. Methods of Marking Seams. ASSEMBLING THE GARMENT: Stay the Edges. Suggestions to Aid in Assembling Any Garment. Suggestions for Pinning and Basting Garment. Preparation of Sleeves. Belt. FITTING A GARMENT: Methods of Fitting. To Make Alterations. Requirements for Fitting the Garment. The Grain Line. The Neckline. The Shoulder Line. The Armscye Curve. The Underarm Seam. Waistline. Hanging the Skirt. The Fit of the Sleeve. Alterations. SECOND FITTING: To prepare the Garment for Second Fitting. Sleeves. Check During Second Fitting. Size of Stitch. Needles and Thread. CONSTRUCTION OF SEAMS APPROPRIATE FOR SILK FABRIC: Preparation of Seams. Seams for Silk Garments. HEM FINISHES: Hems. Finishes for Skirt Edges. To Shrink Out Fullness. Methods of Finishing Hems. Bindings, Facings, and Pipings. NECK FINISHES: Finishes for Slashed Neck Opening. Collar and Neckline—Neckline Finish. Classification of Collars. Lined Collar. To Attach Collar. To Apply a Straight Double Collar. Non-convertible Collar to be Applied as a Band. For Collar with Curved Neckline. Edge Finishes for Single Fabric Collars. For Detachable Collar. Tailored Collars Applied with a Band. FINISHES FOR SLEEVES: Sleeves without Cuffs. One-Piece Tailored Opening. Two-Piece Tailored Placket. Cuffs. BELTS: Fabric Belt. To Make the Belt. Attaching Belt to Dress. PLACKETS AND FASTENERS: Plackets. To Make Bound Plackets in a Slash. To Apply Placket in a Seam. Placket for Side Opening of Dress. Other Types of Plackets. Fasteners Used in Garment Construction. Hooks and Eyes. Snap Fasteners. Slide Fasteners (Zippers). Fabric Loops for Garments. Bound Buttonholes. Buttons. OTHER PROBLEMS. REMODELING: Use of Garments on Hand. Suggestions for Remodeling. Selection of Pattern to Remodel a Garment. Material Used. Renovation. PRESSING: Equipment. Method of Pressing Silk. Pressing Synthetics and Cotton. Aids for Good Pressing. Textile and Ironing Temperatures. Pressing Suits.

CHAPTER 7

STANDARDS FOR JUDGING GARMENTS 215

Methods of Establishing Standards. Standards for the Selection of Ensembles and Wardrobes. Other Requirements of Criteria in Judging. Evaluating an Ensemble. Score Cards. SAMPLE SCORES: Score Cards for Judging Clothing Construction. Individual Scores. Remodeled Garments.

CHAPTER 8

FABRIC DECORATION—SURFACE DESIGN 227

Historical Development. Surface and Structural Designs. Types of Designs. Requirements of a Good Design. Motifs Used in Design. Forms of Fabric Surface Decoration. EMBROIDERY: Historic Facts. Classification. APPLIED SURFACE DECORATION: Decorative Stitches. Open-Work Embroidery. Richelieu Embroidery. Swedish Weaving. Hardanger (Norwegian). Hedebo. French Embroidery. Tapestry and Crewel Embroidery. QUILTING: Technique. Crazy Quilts. TUFTING. DYEING AND FINISHING PROCESSES: Surface Designs by Means of Dyeing and Finishing Processes. Dyeing and Printing. Block Printing. Stencil Dyeing. The Batik Method. Tie Dyeing.

PART II

CHAPTER 9

COMPARATIVE STUDY OF FABRICS—EMPHASIS ON TEXTURE
AND EFFECTS OF DYES 245

FIBERS: Properties of Fibers. Other Fibers. Characteristics of Fibers Summarized. Process of Manufacture. Strength of Yarn. Mixtures. Texture. DYES: Kinds of Dyes. Fastness. Fading. Experiments—Dyeing Wool, Cotton, Silk. TEXTILE PRINTING: Artists' Designs. Direct or Roller Printing. Block Printing. Other Methods of Printing. TEXTILE FACTS IN BUYING CLOTH: Cut and Grain of Cloth. Standard Grades. Silk Sales.

CHAPTER 10

ADVANCED MACHINE WORK—USE OF ATTACHMENTS 265

SINGER SEWING MACHINE ATTACHMENTS: The Binder. The Foot Hemmer and the Adjustable Hemmer. The Tucker. The Ruffler. Presser Feet. Tubular Trimming Attachment. Special Labor-Saving Attachments. WILLCOX AND GIBBS ATTACHMENTS: The Guide. The Hemmers. Gathering. Improved Ruffler. Improved Tuckmarker. The Binder. VALUE OF SAFETY: Safety Precautions in Using the Sewing Machine.

CHAPTER 11

FABRIC DECORATION—STRUCTURAL DESIGN 310

Elements of Textile Design. Types of Designs. Good Designs. Psychological Value of Fabrics. Classification of

Fabrics by Use. HISTORY AND DEVELOPMENT OF FABRICS: History of Spinning. History of Weaving. Ancient Fabrics. Fabrics of the Middle Ages. Fabrics of the Renaissance. Fabrics of Modern Times. RUGS: Development of Rugs and Carpets. Types of Machine-Made Rugs. Glossary for Machine-Made Rugs. Oriental Rugs. Economy in Purchase of Rugs and Carpets. The Selling Points of a Rug. Important Information Concerning the Care of Rugs and Carpets. Problem of Shading. TAPESTRY: Tapestry Design. History of Tapestry. Gobelin Tapestry. REWEAVING: Perching. Burling. Mending. LACE: Lace and Lace Making. APPLIED STRUCTURAL DECORATION: Drawn Work. Hemstitching. Hand Weaving.

CHAPTER 12

CHILDREN'S GARMENTS 349

Scientific Investigations. SELECTION OF CHILDREN'S GARMENTS: Essential Characteristics of Clothing. THE LAYETTE FOR BABIES: Garment Needs. Garments for a Baby. Rompers. List of Garments—Minimum Requirement. Construction of Baby Garments. CLOTHING FOR THE YOUNG CHILD: Details in Planning Clothing. Garments for Recreation in Summer. Winter Garments. Selection of Undergarments. Dresses for the Girl. Boys' Clothes. Shoes and Stockings. Miscellaneous Items for Protection Against Weather. CONSTRUCTION OF CHILDREN'S CLOTHING: Altering the Pattern. Testing the Fabric for Shrinkage and Fastness to Laundering and Sunlight. Cutting Garments. Steps in Construction. Seams. Gathering by Hand. Hemmed Placket for Baby Dresses. Flannel Placket. Bound and Faced Placket for Underwear. Buttonholes. Pockets. TRIMMING FOR CHILDREN'S GARMENTS: Edges and Hems. Other Finishes. Embroidery Stitches. FABRICS FOR CHILDREN'S AND INFANTS' GARMENTS. CARE OF CHILDREN'S CLOTHING: Aids in Training Child.

CHAPTER 13

CONSTRUCTION OF DRESSES, COATS, SUITS, AND OTHER GARMENTS 396

CONSTRUCTION OF A DRESS FOR FORMAL OR INFORMAL WEAR: Selection of Styles Suitable to Type, Occasion, and Fabric. Texture. Economic Factors. Selection of Fabric. Preparation of Fabric—Special Treatment. Review of Study of Commercial Pattern. Testing Pattern. Review for Placing Pattern, Pinning, and Cutting Garments. Suggestions to Aid in Cutting, Pinning, Basting Sheers or Thin Silks. Stitching on Different Types of Fabrics. Seams for Sheer Fabrics. Hems

for Sheer Fabrics. Plackets for Neck Openings. Discussion of Bias Edges. Finishes for Collarless Necklines. Facings. Bindings for Edge Finishes. Piping. For Decoration or Finishing on Right Side of Garment. One-Piece Buttonhole for Sheer Fabrics. Side Seam Placket for a Dress of Firm Fabrics. Side Seam Placket Suitable for Sheer Fabrics. Trimming Suggestions for Tailored Informal and Formal Dresses. CONSTRUCTION OF COATS AND SUITS: A Simple Unlined Suit. Preparation for Making a Suit. Steps in Construction. Sleeves for Coats and Suits. Seams for Coats and Suits. Fitting Coat. Part Lining. Buttonholes for Coats and Suits. Pockets Suitable for Suits and Coats. Decorative Methods of Finishing. Collars for Suits and Coats. Cuffs for Coats and Suits. To Finish Bottom of Coat. To Make the Skirt for a Suit. Plackets for Skirts. Belts on Skirts. To Finish Skirt at Bottom. Godets. Plaits. CONSTRUCTION OF OTHER GARMENTS: Foundation Garments. Blouses, Tailored or Dressmaker Type. Accessories.

CHAPTER 14

STANDARDS FOR THE SELECTION OF READY-MADE GARMENTS 470

Intelligent Buying. Style. Becomingness. Durability. Workmanship. Fit. Setting Standards for Selection. Figure and Type. Review of Materials. Silks. Rayon and Other Synthetic Fabrics. Durable, Well-Finished Seams, Etc. Accessories. Conclusion and Summary.

CHAPTER 15

PRINCIPLES OF MAKING A CLOTHING BUDGET 485

Values. Individual Need Controls Plans and Spending. Basic Factors. Division of Income. The Basis of a Clothing Plan. Determining the Cost of Clothing for a Year. Steps in Making a Clothing Budget. Division of Individual Clothing Budget. Typical Budgets for Help in Planning. For Success in Keeping a Budget. Account Forms. Simple Types of Records for a Clothing Allowance. Summary of Points in Systematic Planning.

INDEX 503

ILLUSTRATIONS

SELECTION OF CLOTHES ADAPTED TO THE INDIVIDUAL

FIGURE	PAGE
1. Types of Figures	5
2. Silhouette Which Follows the General Outline and Proportions of the Human Body	7
3. Low Waistline—Straight Silhouette	7
4. Exaggerated High Waistline—Lack of Harmony in Its Space Divisions	9
5. Wide Skirt, Narrow Shoulders, and Small Hat	10
6. a. Large Hat, Wide Shoulders, Narrow Waist, and Wide Skirt—Tight Skirt	13
b. Large Hat, and Narrow Shoulders	13
7. a. Narrow Skirt with Panniers	15
b. Skirts with Tiers of Circular or Gathered Tunics	15
8. Back Distended by Drapery and Bustle	17
9. Compressed Waist, Flaring Skirt, Full Bust, and Wide Gathered Sleeves	19
10. a. Formal, Symmetrical Balance	20
b. Informal Balance	22
11. Rhythm by Repetition and Opposition	24

SHOPPING

12. An Advertisement Showing a Type of Sale—Stock Clearing	63
13. A Simply Worded Advertisement	64
14. An Advertisement of a Dress That Is an Appeal to Emotions	65
15. High-Pressure Salesmanship Advertisement	66

TEXTILES

16. Ordinary Weaving	77
17. Knitted Structure	77
18. Moth, Silkworm, and Cocoons	81
19. Queen Elizabeth's Ruff of Starched Lace	90
20. Pillow-Made Brussels	92
21. French Valenciennes	93
22. Hand-Made Cluny	93

FIGURE	PAGE
ADAPTATION OF A COMMERCIAL PATTERN	
23. Fashion Artist's Rough Sketch	98
24. Designer Draping the Garment on Figure	99
25. Grading Chart	100
26. Proper Measurements	103
27. Ease Allowance	104
28. Ease Allowance	105
29. Horizontal and Vertical Seam Lines	106
30. Waists	107
31. Necklines	108
32. Collars	109
33. Shoulder Lines	110
34. Body Lines	111
35. Correct Pattern Size	112
36. Diagonal Stripes	113
37. Print and Plaid Materials	114
38. Lengthwise and Crosswise Stripes	115
39. Altering a Commercial Pattern for Height	116
40. Altering Pattern—Hips	117
41. Altering Pattern—Shoulders	118
42. Altering Pattern—Shoulders	119
43. Altering Pattern—Sleeves	120
44. Altering Pattern—Skirts and Shorts	121
45. Altering Pattern—Circular Skirts	122
46. Folding and Cutting Material	123
47. Pattern Layout for Nap or One-Way Design Material	124
48. Pattern Layout for Plaid Material	124
49. Pattern Layout for Checked Material	124
50. Matching Plaids, Stripes, etc.	125
51. Darts in the Waist, Skirt, and Sleeve	126
52. Changing Side Dart to Shoulder Dart	127
53. Changing Side Dart to Shoulder Tucks	127
54. Changing Side Dart to Front Shirring	128
55. Changing Front to Armhole Slash Gathers	128
56. Square Neckline	129
57. V-Neckline	129
58. Front with Revers	130
59. Cowl Neck Design	130
60. Changing to Gathered Sleeve	131
61. Changing to Dart Sleeve	131
62. Changing to Short Circular or Cape Sleeve	132
63. Changing to Sleeve with Fullness at Top	132
64. Changing to Slightly Flared Skirt	133

ILLUSTRATIONS

xiii

FIGURE	PAGE
65. Changing to Six-Gored Skirt	134
66. Plaited Skirt Attached to Yoke	135
67. Skirt with Plaited Side Inset, and Inverted Plait in Center Back	136

MAKING AN ENSEMBLE

68. Lengthwise and Crosswise Folds	144
69. Straightening Material by Stretching	148
70. Grain on Fold, Top Selvage	149
71. Pinning Pattern in Place	150
72. Cut Notches Outside of Pattern Line	151
73. Construction Marks	151
74. Method of Making Tailors' Tacks	153
75. Pins in Perforations, Marked with Tailor's Chalk	154
76. Chalked Thread	154
77. Staying Bias Edges by Stitching	155
78. Dart Stitched and Pressed Open	156
79. Finish Darts on Straight Line	156
80. Seam Pressed Open Before Joining Another Seam	157
81. Keep More Bias on Top When Basting	158
82. a. Even Basting	158
b. Alternate Slip-Stitching or Seam Basting	158
83. Sleeves	167
84. Pinning Sleeve in Place When Dress Is On	168
85. Kimono Sleeve—Edge-Stitched Under Arm	168
86. Raglan Sleeve	169
87. Plain Seams	172
88. Gauge	174
89. Slip-Stitching	174
90. Hem with Seam Binding Stitched Flat on Edge	175
91. Plain or Pinked Hem, Catch-Stitched in Place	175
92. Seam Binding or Bias Tape Folded, Stitched on Edge, and Hemmed or Slip-Stitched to Skirt	175
93. Bound Buttonhole Closing	177
94. a. Shaped Facing Used with Convertible Collar	178
b. Attaching Straight Double Collar—Convertible Collar	178
95. Two-Piece Facing	179
96. Collars with Facing Applied	181
97. Collar Applied with Bias Facing	183
98. Detachable Collar	183
99. Tailored Collar Set in Neckband for Seaming into Neckline	184
100. Finishes at Wrist	186

FIGURE	PAGE
101. a. Underlap and Overlap—One-Piece Tailored Opening	186
b. Shaped Piece for One-Piece Placket	186
c. Two-Piece Tailored Placket	187
102. Straight Fabric Belt	189
103. Continuous Bound Placket Set in a Seam	192
104. Continuous Placket in a Seam	192
105. Placket for Side Opening of Dress	193
106. Zipper Placket in Side Opening of Dress	194
107. Hook and Eye	196
108. Loop for Eye	196
109. Snap Fastening	197
110. Zipper Fasteners	198
111. Loops	199
112. Various Methods of Sewing on Buttons	203
113. Shank Button	203
114. Button Molds	203
115. Pressing Operation	207

COMPARATIVE STUDY OF FABRICS

116. Microscopic Appearances of Fibers	248
117. Difference Between Carded and Combed Yarn under the Magnifying Glass	253

MACHINE ATTACHMENTS—SINGER SEWING MACHINE

118. The Binder	266
119. Bias Cutting Gauge	266
120. Attaching Bias Gauge to Scissors	266
121. Cutting Bias Strips	266
122. Joining Bias Strips	267
123. Cutting Point on Binding	268
124. Inserting Binding in Binder	268
125. Adjusting the Binder	268
126. a. Binding an Outside Curve	269
b. Sample of Outside Curve	270
127. Sample of Inside Curve	270
128. Applying French Folds	271
129. Sample of Bound Scallops	271
130. Turning a Square Corner	272
131. Binding With Military Braid	272
132. The Foot Hemmer	273
133. Starting a Hem at the Edge	273
134. Making a Hem with the Foot Hemmer	274

ILLUSTRATIONS

xv

FIGURE	PAGE
135. Hem Made with the Foot Hemmer	274
136. Bias Corner on Seam	275
137. Hemmed Curve	275
138. The Adjustable Hemmer	276
139. Hems with Adjustable Hemmer; Lace French Way	276-277
140. Making a Wide Hem with Adjustable Hemmer—Use of Zigzagger	278
141. The Tucker and Its Working Parts	279
142. Tucker Set at Pin Tuck and 2 Space	280
143. Tucker Set at 6 Tuck and 6 Space	281
144. Proper Position of Material in Tucker	282
145. Sample of $\frac{1}{8}$ inch Tucks	283
146. The Ruffler and Its Parts	284
147. Oiling Points on Ruffler	286
148. Making a Plain Gather	287
149. A Plain Hemmed Ruffle	287
150. Adding a Facing as the Ruffle is Made	288
151. The Ruffler Adjusted for Plaiting	289
152. Plaiting and Sewing to the Garment in One Operation	290-291
153. Group Plaiting	291
154. Cording Foot with Left Toe	292
155. a. Edge Finishing	293
b. Shirred Cording	293
156. Applying Slide Fastener	293
157. The Tubular Trimming Attachment	294
158. Work Done by the Tubular Trimming Attachment	295

MACHINE ATTACHMENTS—WILLCOX AND GIBBS SEWING MACHINES

159. Showing Use of Guide	296
160. Hemmers	297
161. Entering the Goods to Make a Narrow Hem	298
162. Finishing a Narrow Hem	299
163. Commencing a Wide Hem	299
164. Finishing a Wide Hem	300
165. Shows Foot Gatherer, and as Applied to a Presser Foot, also How to Thread for Gathering	301
166. Ruffler	302
167. Shows Guide Adjusted for Wide Tucks	303
168. Shows Guide Adjusted for Narrow Tucks	304
169. a. The Binder	305
b. Binder in Operation	305
c. Needle Guard	306

FIGURE		PAGE
	WEAVING	
170.	a. General View of Wilton Rug Construction	328
	b. Axminster Rug Construction	330
	c. Other Types of Weaves	330
	d. Hand Weaving Processes	336
171.	Showing the Process of Weaving Damages	344
172.	Drawn Work	346

CHILDREN'S GARMENTS

173.	Babies' Shirts	355
174.	Rompers	357
175.	French Seam	371
176.	Flat Fell Seam	371
177.	Lapped Seam	372
178.	Turned-in Seam	372
179.	Standing Fell Seam	373
180.	Gathering	374
181.	Hemmed Placket	375
182.	Flannel Placket	375
183.	Bound and Faced Placket	375
184.	Barring and Overcasting Buttonholes	376
185.	Patch Pocket	379
186.	Patch Pockets with Lap	379
187.	Pinning Bias Strips to Ironing Board to Fold the Edges	380
188.	Scalloped or Shell Edge	381
189.	a. Scalloped or Curved Hems	382
	b. Rolled Hem	383
190.	Shirring by Machine or Hand	384
191.	Smocking	385
192.	Embroidery Stitches	388
193.	Running Stitches	389

CONSTRUCTION OF A DRESS

194.	Rolled Seam	406
195.	Hemstitched Seam	406
196.	Picot Seam	406
197.	Hem Turned	408
198.	Even Hem — Wide	408
199.	Blind Hemming	408
200.	Slip-Stitched Hem	408
201.	Running Stitch	409
202.	Rolled Hem	409
203.	Extension Opening	411

ILLUSTRATIONS

xvii

FIGURE	PAGE
204. Bias Edges	412
205. Bias Strips	413
206. Continuous Bias Strips	414
207. Cutting Bias on Twill Material	414
208. Binding Pinned and Basted before Stitching	416
209. Shaped or Fitted Facing for Armseye	416
210. Exceptional Facing	416
211. Bias Facing for a V-Shaped Neckline	418
212. Bias Facing for a Square Neckline	419
213. Bias Facing on U-Shaped Neckline	419
214. Single Bias Binding	422
215. Double Bias Binding	423
216. Binding Scallops	423
217. Piping used as Facing	424
218. Cutting and Pinning Shaped Facing	425
219. Cowl Neck with Weight	426
220. Sheer Fabric Bound Buttonhole	427
221. Fagoting	430
222. Braiding by Hand — Soutache Braid Sewed Flat	430
223. Straight or Slanting Couching	431
224. Russian Interlaced Stitches	431
225. Folds Applied as Bands	432
226. Shirred Trimming with Fringe Edges	432
227. Snail Shirring	433
228. Appliqué of Lace	433
229. Cross-Stitch on Hem	433

CONSTRUCTION OF COAT OR SUIT

230. Two-Piece Sleeve Pinned and Basted	438
231. Seams for Woolen Fabrics	440
232. Coat with Half Lining	443
233. Bound Buttonhole Made with Folds	444
234. The Tailored Buttonhole	444
235. Bound Pocket	446
236. Pocket with Separate Welt	448
237. Bar Tack	451
238. Arrowhead Tacks	451
239. Crow's Foot Tacks	451
240. French Tacks	451
241. Interlined Collar with Interlining Catch-Stitched	452
242. Collar Attached — Fitted Facing for Neckline Finishing	452
243. Open Cuff with Interlining Catch-Stitched and Facing Slip-Stitched	453

FIGURE	PAGE
244. Closed Cuff	453
245. Interlining at Wrist	453
246. Plackets for Skirts	456
247. Inside Belt	459
248. Finishing Hem of Skirt	460
249. Godets	462
250. Plaits	464

DISTINCTIVE CLOTHES

PART I

CHAPTER 1

SELECTION OF CLOTHING ADAPTED TO THE INDIVIDUAL IN LINE, DESIGN, AND COLOR, AS APPLIED TO DRESS AND ACCESSORIES

Human Form.—Human beings are born into the world in many different shapes and sizes. Some are tall, some are short; some are fat, some are thin; some have broad shoulders and narrow hips, while others have narrow shoulders and broad hips.

There are almost as many variations as there are individuals. The ideal human figure, however, is beautiful. The lovely curving lines from head to toe, the perfect proportion of each part to every other, make the body a miracle of beauty and symmetry. Of course, few human figures can even approach this ideal. It remains for the artistry of fashion designers to make the imperfect human figures seem more nearly perfect. This is done through optical illusion—the right lines and colors in clothes which create illusion; bad figures are transformed into good figures, and good figures into better ones. This is the magic that makes women pay thousands of dollars for their clothes. And this is the magic you must master if you are to be a successful designer.

Remember that the human body is a unit. No part may be studied, except very imperfectly, without seeing it as a subordinate part of the unified whole. Furthermore, we must not consider the body a static flat surface on which to hang clothes. It is a three-dimensional form in constantly changing posture.

These facts may appear to be self-evident and elementary, but they are exceedingly important. How many girls look well-dressed until they turn around? How many women buy hats without consulting a full length mirror?

Self-Analysis of the Individual Figure

Classification of Figure.—Our first problem in the selection of clothing adapted to the individual in line, design, color, and texture, is to find out under what classification to place the individual figure.

STRUCTURAL ANALYSIS.—To make an analysis to determine the structural or natural outlines of the human body, use one or more of the following methods that are in general use.

1. For a systematic study of one's outline, a full-length mirror should be available. It is very difficult to secure a comprehensive idea of the lines and relative proportions of the body where sections of the body are reflected in a small mirror. What does this analysis tell you?

2. Silhouette in a bathing suit. Pin a sheet of paper the length and width of the figure to the wall or to a screen and stand with back flat against the paper, then with a soft pencil or charcoal have the outline traced. Stand with the side of figure to the wall and secure a profile view of figure. What is your type of figure?

3. Shadowgraphs. To make a silhouette, stand before a screen covered with unbleached muslin with the lights behind you so arranged that they will throw your figure in relief. For this use the screen lantern, where available.

4. Photograph of figure. Have full-length front and profile view taken in a one-piece bathing suit.

5. Measure the length of the head from the point where the hair touches the forehead to the tip of the chin. Mark off this length on cardboard and see how many times this measurement can be marked off on your figure from top of head to feet. Compare these measurements with those of the normal figure.

What you should secure in your self-analysis will be an outline of your actual figure, placing you in the classification to which you belong. It will also give you an idea of your posture as well as any abnormalities that exist in your figure.

Make an honest analysis of your figure, for it will guide you in adapting current styles to a silhouette that may not be

normal. It will also show you very clearly that certain styles are not suitable for you. It will also enable you to make the most of your good points and help you to know how to minimize your weak characteristics. However, do not make a self-analysis unless you propose to profit by the experience.

Activity

Now that you have seen your own figure objectively by means of a full-length mirror and have analyzed it by measurements or by the aid of a shadowgraph, compare it with the present ideal figure. How do you measure up? Have you good proportion? Is your waist

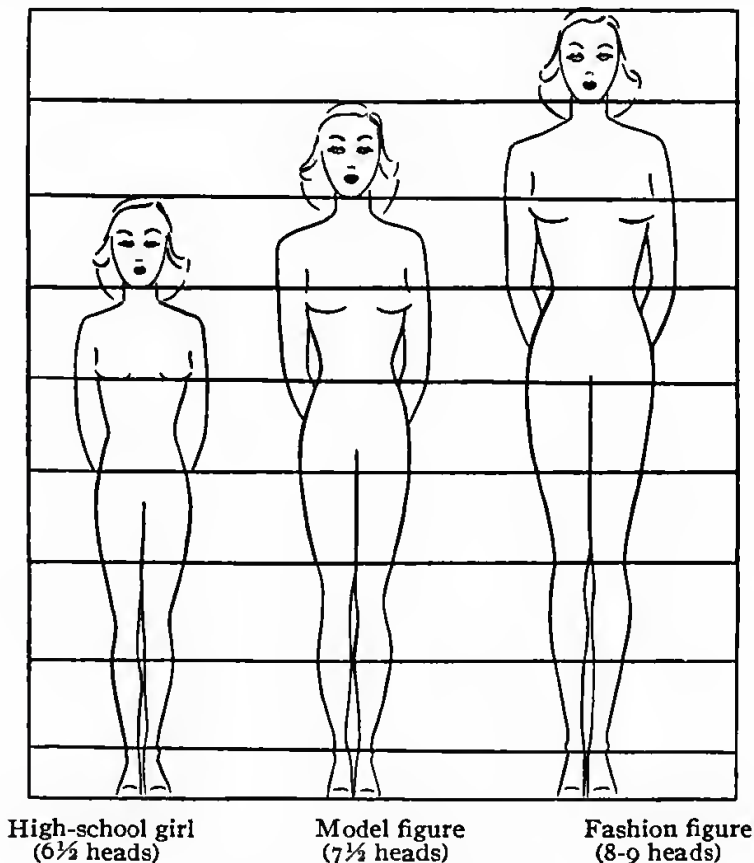


FIG. 1. Types of Figures

spaced the right number of inches below your bust? How many heads or units tall are you? With the truthful analysis before you, list your shortcomings in red pencil and your fine points in black ink. How many of these shortcomings are due to poor posture? Now you are prepared to consider ways of overcoming these difficulties.

When you have successfully solved your own figure problems, you will be better fitted to solve those of other people.

The Model Figure.—By a process of artistic selection, the costume designer has adopted proportions of the human form which give the most pleasing effect and has called this form the Model. The whole figure is divided into units or head lengths. A head length is the distance from the top of the head to the chin. The length and width of the body will vary with the length of the head. The body is divided into head lengths as follows: (1) head, (2) chin to bust, (3) bust to waist, (4) waistline to the end of the torso (where legs branch off from body), (5) end of torso to half-way down thigh, (6) half-way down thigh to center of knee, (7) center of knee to near ankle, (8) near ankle to the foot. Width of shoulders, bust, and hips—about 2 head lengths. Waist— $1\frac{1}{2}$ head lengths. Neck—about $\frac{1}{2}$ head. From wrist to elbow should be about $1\frac{1}{2}$ heads. (Fig. 1.)

While the parts of the anatomy are similar, shapes, sizes, and lengths will vary in different people, thus causing many variations in silhouettes. Review Chapter 1, pages 12-20, *Attractive Clothes*.

Activity

Measure your figure and compare with fashionable figure in Fig. 1. You will probably find that the fashionable figure is taller and slimmer than your figure.

Analysis of Fashion Design

Structural and Decorative Design.—There are two kinds of design to be considered in dress:

1. **STRUCTURAL DESIGN.**—Structural design is concerned with the silhouette, outline, or style lines of the dress. The fundamental structural shapes (types of sleeves—plain, leg-of-mutton, bishop, gathered, epaulette, and raglan); shapes of skirt—circular, straight, or gored; collars—flat, rolled, or circular; and shapes of blouse—close fitted, draped, or bloused

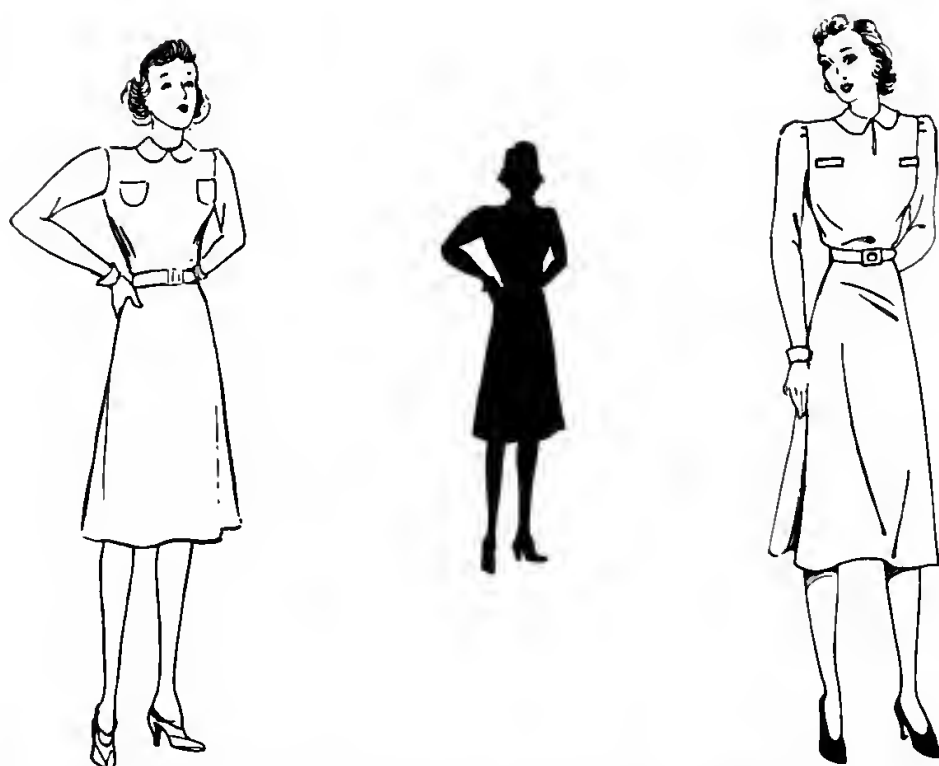


FIG. 2. Silhouette Which Follows the General Outline and Proportions of the Human Body



FIG. 3. Low Waistline (Lack of harmony with structural parts of the body)—Straight Silhouette (Hides the curves of the body)

all have their effect on the outlines of a garment and determine the silhouette.

Lines within the silhouette (necklines—and style lines of collars; placing of shoulder seams; shape and position of the armscye; placing of underarm seam; the waistline and the length of skirt), while not affecting the outline to any great extent, do have an effect upon the styles of each new season and must be considered as an important part of structural design.

2. DECORATIVE DESIGN.—In dress decoration, design means the enrichment that has been added to structural design for the purpose of adding to its beauty. The placing, shapes, and methods of decoration and colors may be as varied as one wishes, but these changes do not have any effect on the outlines of the dress.

Restraint in decorative design is important, and caution should be taken not to spoil (by overdoing) the pleasing relationship between the structural and decorative design.

Purposes of Dress.—Since clothing is planned to be worn on the human figure, there should be some relationship to the figure. We have found that the actual structural shape of our body makes it impossible for us to wear certain types of silhouettes; therefore, it is necessary for us to know how to relate the current styles to our individual figures if we hope to meet the challenge of good taste in dress.

Analysis of Fashion Silhouettes.—When we study fashion changes, we note that the changes occur mainly in the outlines or silhouettes. These changes have varied throughout the ages, as follows:

The silhouette which follows the general outline and proportions of the human form and which is harmonious with its structural parts. This silhouette, usually, reappears when a silhouette has reached the height of some ridiculous exaggeration in its outline. (Fig. 2.)

The silhouette which is straight in effect, hides the curves of the body, and in its space divisions shows lack of harmony



FIG. 4. Exaggerated High Waistline (Empire period)—Lack of Harmony in Its Space Divisions (Modern)



FIG. 5. Wide Skirt, Narrow Shoulders, and Small Hat (Overemphasis of detail)-

with the structural parts of the body. Figure 3 shows a lowered waistline which is out of harmony with the structural divisions of the body. Figure 4, the raised waistline, also shows a lack of harmony in its space divisions.

The distorted silhouette which occurs when some part of the silhouette is emphasized or extreme in outline. Some of the outlines which have distorted the human figure are: The outline which resembles a triangle, as shown in Figure 5. Small hat, narrow shoulders, flat bust with long skirt, full gathered or circular, and distended at bottom by ruffled petticoats or in some cases by hoops. Then there is the silhouette which is wide at top (large hat, leg-of-mutton sleeves, full bust) and narrow at bottom, with a skirt so narrow that it is difficult to walk (Fig. 6).

We also find, on analysis, that the figure has been distorted by voluminous skirts with panniers—or by narrow-draped skirt with tiers of circular or gathered tunics (Fig. 7), or sometimes the back was distended out of all proportion by drapery or by bustles of crinoline or coils of wire (Fig. 8).

Another distortion which occurred and perhaps of more danger to the health was the so-called hour-glass figure in which we find the large or small hat, compressed and closely fitted waistline, and the flared skirt. (Fig. 9.)

These silhouettes, while recurring at frequent intervals, are never copied accurately or completely but there is no mistaking the trend of the style. For instance, the current silhouette while emphasizing the natural fitted waistline, does it by distending the width of the shoulders by slight padding or shaping of the sleeves to give a broader effect. Lines, yokes, and darts, by directing the attention diagonally to the shoulders, increase the apparent width of the shoulders. The appearance of a small waist is emphasized in this way rather than by extreme drawing in of waistline. The skirts are short and slightly flared.

Notice that these differences in form or silhouette are produced by changes in (1) the sleeves, (2) the waistline, or (3) the skirt.

Effects of Lines on the Figure.—Various effects of lines are produced as follows:

1. Lines which tend to shorten the figure are illustrated by large drooping hat brims, yoke lines in the waists, broad neck and collar lines, and an overskirt or drapery shorter on the sides than in the center front.

2. The effects of greater height may be obtained by using V-necklines, long rolling collars, narrow upturned hat brims, an inconspicuous hem line, particularly one which is longer on the sides than in the center front.

3. There are many lines which give the broadening effect. Some of them are: broad belt or girdle, belt of contrasting color, large cuffs, full sleeves, conspicuous pockets at hip line, yoke line in skirt or waist.

4. Slenderness is obtained by emphasizing the center line and leaving the outside border inconspicuous. The center line of a dress may be featured by using a panel; row of buttons; long, narrow jabot, ties, or vestee; long V-neckline.

Principles of Design

There are certain principles that govern these lines of the costume and determine whether they are artistic or not. These are: (a) proportion, (b) balance, (c) harmony and unity, (d) rhythm and emphasis.

Proportion.—Proportion or scale in dress expresses a pleasing relationship between lines and spaces and in their relation to the human form.

GREEK LAW OF PROPORTION.—The Greeks with their artistic sense developed a fine sense of proportion, and therefore the law of Greek proportions is in general use by designers and clothing stylists. The law of Greek proportions is expressed by the ratio of 2:3; 3:5; 4:7; 5:8.

THE HUMAN FIGURE.—The structural outline with the division of spaces is the foundation or shape upon which we plan our clothes. The ideal human body in its shape and proportion



FIG. 6a. Large Hat, Wide Shoulders, Narrow Waist, and Wide Skirt—Tight Skirt



FIG. 6b. Large Hat and Narrow Shoulders (Difficult to walk in narrow skirt.)

of parts represents beauty, and expresses pleasing relations between its parts. The human body divides naturally into three parts: the face; the upper section, which includes the shoulders, bust, arms, and waistline; and the lower part of the body, the hips, and the legs. Notice the placing of the waistline, not at the exact center of the length of the body but above the center. From the top of the head to the feet, the waistline divides the body by a ratio of 3:5.

Sometimes one section is overbalanced by the other, thus destroying the beautiful symmetry between the parts. This presents a problem in proportion which must be recognized and adjusted by either concealing it or by emphasizing some other part as necessary to bring the parts into pleasing relations. By the right choice of and arrangement of lines, colors, and texture, the below normal size may be brought into better relation with the oversized part.

To illustrate: Increase appearance of the shoulders by built-out shoulder line for narrow shoulders, or decrease the apparent size of hips by vertical plaits, tucks, or division of gores of skirt. Another method: Choose lines, colors or textures to emphasize pleasing points and center interest away from figure defects; thus, center interest at face and around top of body to lead attention away from below waistline defects.

Since proportion in dress must be considered both for the entire area of the silhouette (the individual figure) as well as the relation of the lines and space divisions (proportion of parts) with the figure, a few general suggestions may help in achieving pleasing proportions.

Equal proportions should be avoided as well as those which are too unlike. The former are monotonous and the latter violate principles of harmony, unity, and balance, thus making them inartistic and uninteresting.

Unequal divisions of space, if not too great, lend variety to the design and are interesting. In planning the relation of the waist to the skirt, the garment should not be divided in half by the areas of the blouse and skirt. When fashion varies the length of skirts or placing of the waistline, care must be taken



FIG. 7a. Narrow Skirt with Panniers



FIG. 7b. Skirts with Tiers of Circular or Gathered Tunics

to relate the placing of the waistline not only to the bottom of the skirt but to the entire silhouette of the figure as well. Usually the skirt area should be greater than the waist. This proportion must be carefully worked out for the individual figure regardless of fashion demands.

THE LENGTH OF JACKETS AND COATS.—The placing of the lower edge of jacket depends upon the size of the individual, age, style of garment, the fabric (whether of contrasting color or texture or one color scheme between jacket and dress).

Jackets and coats are classified according to length, as (a) bolero, (b) waist length (just below waistline), (c) hip length, (d) three-quarters or seven-eighths, and (e) long (reaching to bottom of dress). How can the Greek law of proportion help in determining the correct length of jacket in relation to both the silhouette and skirt length?

The bolero jacket, with its lower edge at or just above the waistline, gives an illusion of greater height by increasing the lower part of figure. Short jackets are in better relation to the silhouette when the skirts are long. Short jackets with short skirts divide the figure too equally to be interesting and are apt to increase apparent width.

The hip-line jacket depends entirely on the slenderness of figure and prevailing length of skirt. It broadens the hip line and the proportion is usually in poor relation to skirt, especially if skirt is shortened.

Coats $\frac{3}{4}$ to $\frac{7}{8}$ in length, especially if of contrasting color or texture, are not well related in spacing to the skirt at bottom and, in addition, the pleasing relation to the silhouette is destroyed.

We have been taught in our art classes that vertical lines increase apparent height but it will be safer if we consider the spaces formed by the lines instead of just lines. If they divide the figure (at bust or hip line) into equal spaces by gores or panels, the eye is led across the figure and the apparent size is increased. Wide panels, because of uneven spacing, increase width; narrow panels, because of uneven spacing, increase height. The length of panels or tunics increases or decreases height determined by length (proportion), which depends upon the placing of lower edge (at hip it widens, but if extended below hip, it lengthens). If a panel in waist divides the blouse into three equal parts, the upper part of figure is increased, bringing it in proportion with larger hips.



Bustle

FIG. 8. Back Distended by Drapery and Bustle
17

The Principle of Balance Applied to Clothing.—Balance is that principle of Art which requires an equalization of forces or attractions around a central point or axis. In clothing design, balance implies a restful harmonious arrangement of lines, shapes, and colors on both sides of a central axis within the silhouette or outline of the figure.

HUMAN BODY A UNIT.—In applying the principle of balance to clothing the body, the entire silhouette must be considered as a unit, consisting of a front, back, and a profile view in ever-changing posture when in action. Attention must, therefore, be given to insure a balanced arrangement of lines, areas, and colors to right and left of a central axis on front, back, and sides, as well as above and below a horizontal axis. How many girls' clothes look well-designed until they turn around? How many women buy hats while sitting down without regard to balance between figure and hat?

TYPES OF BALANCE.—There are two types of balance: (1) formal or symmetrical, and (2) informal, asymmetrical, or occult.

In symmetrical or formal balance, the designs or objects are alike and balance on a vertical axis or above and below a horizontal axis.

Formal balance is more easily recognized, and gives an impression of simplicity, dignity, and strength. It is therefore more appropriate for school, street, business, or sport wear. This balance is so plainly seen that it may sometimes be monotonous. In asymmetrical, informal, or occult balance, although the shapes and sizes are unequal and placed at unequal distances from the center axis, there is an attraction and interest between them which gives a balance that is more subtle and interesting, but it is also more difficult to avoid errors in working them out. (Fig. 10.)

BALANCE BETWEEN LOWER AND UPPER PART OF FIGURE.—The upper part of the figure should not be made topheavy by large hats, wide sleeves, or capes, for the lower part would then be overbalanced. Nor should the lower part overbalance the



FIG. 9. Compressed Waist, Flaring Skirt, Full Bust,
and Wide Gathered Sleeves

upper by the use of a small hat and a voluminous skirt. One part of a costume should not be allowed to throw another part out of balance by areas of color, shapes, or texture.

Harmony and Unity.—This is achieved in any arrangement when there is a common relationship or similarity between the parts of the design. In dress there should be not only a pleasant relationship and unity throughout the design between lines, colors, and textures, but the style of the dress



FIG. 10a. Formal, Symmetrical Balance (Right and left areas equal)

must be harmonious with the outline of the figure and it must accord with the characteristics, personality, and coloring of the individual.

The parts or shapes within the silhouette must be in scale with the size of the figure and with each other. Well-

proportioned spacing in combining textures, areas, values, and intensities of colors must all be considered in order to achieve harmony in dress construction. A further requirement: the style of the garment should be harmonious in texture, design, color, and use or purpose for which it is planned.

Harmony may be achieved by repetition of details (bands, buttons, ruffles, tucks), trimming, color, or textiles, arranged differently on the separate parts of the costumes. The trimmings or buttons, while smaller on sleeves or blouse, should be the same shape, color, or tone in order to have sufficient likeness to make them appear in relationship.

While there must be a pleasing relationship between parts of the costume, there must be variety in order to avoid monotony.

Rhythm.—A measured movement of lines, shapes, or colors by means of which the eye is led to some planned part of the design. In dress design, sometimes the face is considered of most importance. In that case, lines, interesting details, or colors may be centered near the head, or attention may be turned toward the face by leading the eye movement in that direction. *To illustrate:* Colors, necklaces, clips, bows, bright colors, and interesting designs in yokes may be placed near the face with broken lines of color, radiating tucks, folds, or plaits leading in their direction. It is not wise to have an outstanding design or shape located on any part of a dress without some link connecting it to the dress or some part of the dress. A design that stands out from the dress, striking in color or elaborate in beading or stitches, instead of lending interest to the garment, makes one wonder why it is there.

Rhythm may be achieved by repetition, opposition, or transition of lines.

REPETITION.—In repetition, lines, shapes, or colors are repeated at regular intervals. To be interesting enough to center attention, there must be variety in length or spacing of the lines, because if lines are repeated, with no variation, the effect is monotonous and uninteresting. (Fig. 11a.)

Illustrations: In serge fabrics, notice how the diagonal effect is repeated in such a way as to carry the eye from one part to another, and note the effect produced when the even flow of movement is interrupted by the poor design of a dress. (Fig. 11b.)

If we examine an attractive dress with plaits, we shall find that the plaits increase or decrease in size, and the eye is led from one plait to another. This principle is repetition by gradation. (Fig. 11c.)



FIG. 10b. Informal Balance (Two areas of dresses different but of equal interest)

The design of a draped costume that starts from a common point like the hip or shoulder and develops into a series of radiating folds illustrates repetition by radiation. (Fig. 11d.)

OPPOSITION.—In opposition, lines and outlines of shapes interest or oppose each other. A combination of vertical and horizontal effects may be secured by variety in texture of

fabrics, by interesting combinations of yokes and plaits, by values or intensities of colors. Diagonal lines used in V shapes, necklines, yokes, and girdles may be used in costumes to achieve a flattering and interesting effect. A V-shaped arrangement of lines extending from side curve of neck or from shoulder to a point at or slightly below waistline is a device that may be used for broadening the shoulders, lengthening the waistline, or minimizing the size of hips, thus bringing the proportions of a figure into better relationship by rhythmic lines. (Fig. 11e.)

This type of rhythm lends dignity and severity to a costume and is best adapted to the tailored, sport, street, and school dresses.

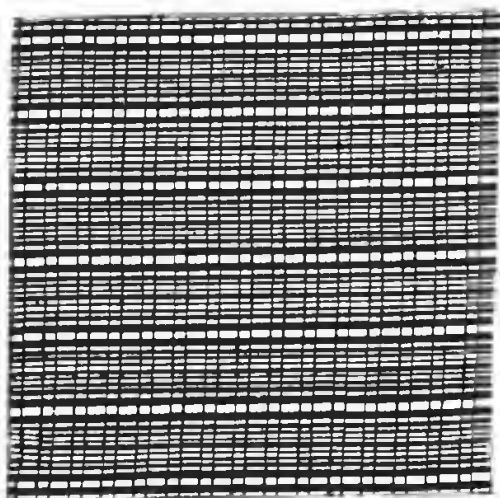
TRANSITION OF LINES.—When we wish to soften the effect, we connect lines and outlines of shapes by curves and lead the eye by interesting movement from one shape to another.

Illustration: By modifying the V-shaped neckline, a more becoming shape is secured by rounding the point into a U curve. The cowl neck which is a transition between horizontal and vertical lines may be made becoming to all types of faces by the right placing of clips. A straight-line yoke may be made more becoming and interesting by the insertion of curves.

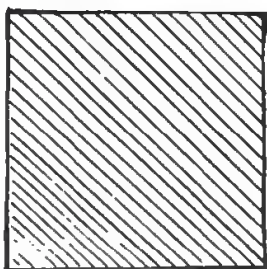
Emphasis in Dress; Center of Interest; or Subordination.—Emphasis in dress is achieved by some method or arrangement whereby attention is directed toward some special point, so that interest is aroused in an individual's appearance.

Attention should be centered on the personality of the individual who is wearing the clothes and not on the clothes themselves. Thus, no garment should be made so striking in itself that it is more important than the individual who wears it. This is an important factor in good dressing. The woman who has successfully subordinated her clothes to her personality will be complimented upon how well she looks, not upon how smart her clothes are. This is the highest compliment, because if a woman is perfectly dressed, people will not notice her clothes but only the delightful result.

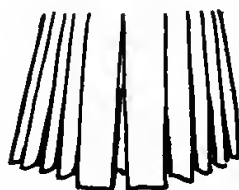
The face is usually the center of interest so that the eye should be attracted at or near the face with an appeal so strong



a. Repetition softened by variety in spacing and width of lines



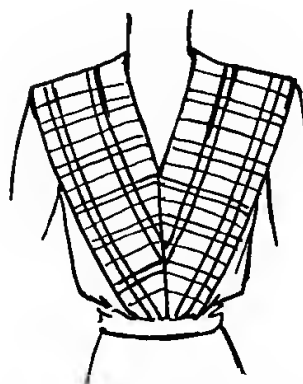
b. Diagonal effect in serge fabric



c. Repetition by gradation in plaits



d. Repetition by radiation



e. Opposition for broadening shoulders

FIG. 11. Rhythm by Repetition and Opposition

that it will rest there. Collars of becoming line, color, or texture; necklaces, beads, or pendants of interesting shapes or attractive colors; brooches of interest, because of fine design or value; or clips of pleasing color or odd design—any of these may be used to center interest at the head. If used carefully, such features may be repeated in smaller detail at wrist by cuffs, matching bracelets, belt buckles, or interesting touches of color. However, care must be taken to avoid too many details or so much variety of minor centers of interest as to distract or cause a scattering of attention, with resulting confusion and inattention.

Undesirable characteristics of the human body should be minimized by a forceful centering of interest away from them, but the wearer's good points may have the center of interest placed to call attention to them.

Desirable characteristics should be emphasized. *To illustrate:* Simplicity of line and parts (fundamental shapes) of the garment may be used to call attention to an individual figure when its outline and proportions are pleasing.

Beauty of fabric may be emphasized by the selection of a style with few gores or small parts.

An attractive personality may be made the center of interest by the selection of a style to emphasize those traits of personality.

Consult Chapter 8, pages 295-296, *Attractive Clothes*.

Color Principles and Their Use in Clothes

Good taste in the use of color is important, for no matter how wisely the lines and design of the dress or ensemble has been planned, or how skillful the workmanship, the costume will not be successful if the colors are not becoming or if the combinations are inharmonious.

Each of us, to a greater or less degree, has color sense, and all have had some training in appreciation of color. What we need now is a review of color theory, with a more intensive study and training in the application of the principles of color to dress.

Theory of Color.—We have learned that color is made possible only when the eye responds to light reflected from the surface of the object. When light strikes an object, some or all of the rays are absorbed or reflected. If all the light rays are absorbed by one particular color, the rays of that color will be reflected into the eye and the effect will be a visual response to that color only. (Consult *Attractive Clothes*, pages 141-142.)

Hue.—This is the quality of a color which gives it its name and which distinguishes it from any other color, such as yellow, red, green. With all the new and renamed colors being introduced each season, a knowledge of color terms will help us avoid mistakes in selection.

WARM AND COOL HUES.—Colors are classified as (a) warm or (b) cool colors, depending upon the amount of warmth or coolness which they reflect. Red, orange, and yellow are the warmest hues. Green becomes warmer as it becomes closely related to yellow, and cold when it becomes more blue. When blue predominates in violet, it reflects coolness; if red predominates, it reflects warmth. This characteristic of hues is important to keep in mind when selecting becoming color. As we study colors, we note also that the warm hues appear more conspicuous, aggressive, and advancing and will, therefore, make the human figure appear larger and more outstanding than the cool hues which by their nature are inconspicuous and retiring. Cool hues will not give a strong impression of an object and will, therefore, reduce the apparent size of the human figure. Appearance of size, then, can be reduced by careful selection of becoming, receding colors.

Values of Color.—Another quality of color is determined by the amount of lightness or darkness. The difference between dark and light colors is a difference in value. Values which are lighter than normal are called tints, and those darker are called shades. Black and dark values seem to decrease the apparent size of the human figure because they absorb color, while white and light colors increase apparent

size because they reflect light; therefore, a person looks larger in light-colored clothing. It is also important to note, when using accent notes or trimmings on a garment, that the color will be stronger on light garments and weaker on dark colors; therefore, more vivid colors can be used in the former case for emphasis. Combinations of nearly equal value, while restful, are apt to be monotonous and lack interest. Strong value contrasts should be very carefully planned, for they not only call attention to the outline but the principle of emphasis may be misused. The value scale progresses gradually through a series of nine steps, from black at bottom, gray or neutralized color at middle of scale, and white at top. (See *Attractive Clothes*, page 142.) In dress the darker values should be below the center. *Illustration*: a dark skirt and lighter upper part. Notice the effect if these areas are reversed. Notice the effect of white shoes and light hosiery with a dark dress and hat.

In areas of color, the neutralized or less luminous may be increased and the tints or more luminous will be decreased.

INTENSITY.—Intensity, chroma, or saturation indicates the brightness or dullness of a color. Colors in the outer circle appear at their fullest intensity (spectrum intensity). As colors move toward their complements, or neutral gray, they become less intense and are known as of low intensity. Colors of full intensity are very brilliant and should be used in small areas because of their striking quality.

The intense or brilliant colors are more advancing than the more neutralized colors. Colors in the lower intensities or more neutralized colors are softer in effect and are better adapted to large areas of the costume. Intense colors can be used as emphasis, and in many cases this accent might be used to redeem an unbecoming or monotonous dress by introducing a becoming and striking quality to the dress. An entire dress of intense red, orange, or yellow would be very tiresome to either wear or live with day after day, but if a neutralized tone such as maroon or garnet is substituted for the brilliant red; and mahogany or terra cotta for the intense orange; or

perhaps maize for the brilliant yellow—a more effective appearance should result. Neutral tones of different colors in combination appear monotonous and uninteresting unless relieved by small areas of a brilliant color. For this accent, a colorful flower, beads, pendant, or brooch may be used.

Law of Areas.—The so-called Law of Areas is very important, for balance, harmony, emphasis, and proportion of colors depend upon it. It states that the larger the area, the lower in intensity or more neutralized the color should be; the smaller the area, the higher in intensity or more brilliant the color may be.

Color Harmonies.—In color harmony there is a pleasing relationship between lines, value, and chromas when colors are combined. There are two plans of combining colors for pleasing effects in dress design: related schemes and contrasting schemes.

RELATED HARMONIES.—*Dominant or Monochromatic.* In this scheme, two or more values or intensities of one hue are combined. This scheme, while popular and safe to use, may be monotonous unless different textures are combined. A wool dress of navy blue with a belt and flower or ornament of soft leather of a little higher chroma, would avoid monotony by variation in textiles.

Associated, Related or Analogous Scheme combines hues which are adjacent on the color chart. In this scheme there must be one hue common to all the hues combined. There must be contrast in the values or intensities. *Illustration:* yellow-green, green, blue-green, blue (blue common to all); red-orange (brown), orange, yellow-orange (red common to all in group).

CONTRASTING HARMONIES.—*Complementary Harmony.* Any pair of colors, that are exactly opposite each other in the color chart, when combined make a complementary color scheme. This is a more difficult harmony to plan, but if the Law of Areas is carefully followed with value and chroma carefully

adjusted, this harmony is interesting. A large area of the dark hue will be balanced with a small area of the light complement. A small intense hue will be combined with a large amount of its complement. *Illustration:* a blue (dark value) dress with orange (light value) piping or touches of embroidery.

Split Complementary Harmony. For this harmony, a primary color is combined with a color each side of its complement, but omitting the complement. *Illustration:* blue combined with red-orange and yellow-orange, thus splitting the orange. Purple with yellow-orange and yellow-green, omitting yellow. In this case, observation of areas, values, and intensities is important.

Contrasting Harmony. Black, white, gold, or silver, when used with a color, forms an attractive harmony. The combination of rose with gray is an attractive example.

Restraint in the use of color is important.

Line Effects.—The line effect of clothing is formed also by difference in color, texture, luster, etc. The line or shadow may be very slight, yet it may produce a favorable or unfavorable part in the design. The retina is so very sensitive that difference in color or difference in texture of a fabric produces the effect of an after-image of a line. *Illustration:* Color at the extremities of the body—head, feet, arms—gives an elongation or lengthening after-image. When a costume is made of two different materials or finishes, the junction conveys an after-image of a line in the direction of the fabrics. Short sleeves give an after-image of a horizontal line, which gives an after-image of breadth or width.

Personal Coloring.—The coloring of a person is determined by the complexion which forms a background for the tints of the lips, cheeks, and the skin shadows about the nostrils, eyes, and mouth.

Skin tones vary from the yellow of the sallow complexion, through the red-orange of the florid brunette, to the pink of the blonde. The natural contrasts vary from deep, rosy tints of the lips and the cheeks to the spotted brown of the freckled,

and the tan of the sunburned. The face shadows may vary, according to the general tone of the skin, from brown, or gray, to purple.

With all these possible colors and a wide diversity in skin combinations, one can readily see how difficult it is to classify every one into a few types and then decide what each is to wear. Our most effective manner of determining the colors that are becoming to any one individual is to place various hues, values, and intensities against the face, or to place the fabric under the chin as described on page 302 of *Attractive Clothes*.

FOREGROUND COLORS.—The coloring due to the (1) lips, (2) eyes, (3) hair, and (4) cheeks gives the foreground color to the complexion and high points the face.

BACKGROUNDS.—The coloring due to the background should be emphasized—that is, the coloring of the (1) temple, (2) neck, (3) throat. The shadows and hollows of the face must be considered very carefully, and if undesirable they must be counteracted.

Personal Color Types.—There are four general types: (1) the blonde, (2) the brunette, (3) red-haired, (4) the white-haired woman. Within each of these four types there is a wide variation in skin coloring. Some may have a very clear complexion, others may have a very sallow complexion, and still others may have a great deal of red in their skin coloring which may make the complexion appear florid. Those in any of the four types who have a clear complexion will find they have a wider choice of colors than those whose skin coloring is definitely sallow or florid.

Persons whose skins are definitely sallow, or those who have more yellow than red in their skin coloring, will find that colors which emphasize the yellow in their skin tones are unbecoming. Thus yellow, yellow-green, and blue-purple are generally conceded to be poor color choices for these people. Red-yellow, because it is apt to bring out red rather than yellow tones in the skin coloring, usually is becoming—as are blue, green-blue,

and green. Black is generally a poor color choice for persons with a sallow complexion.

Black is generally becoming to those with a clear skin or to those who have more red than yellow in their skin coloring.

Those who have more red than yellow in their skin coloring will find that colors which bring out the red in their skin are to be avoided. Dull colors and those of medium value, in the hues which are becoming, will be the wisest choice.

The white or gray-haired woman of mature years may have a sallow complexion with no coloring, or a fair complexion with slight or good coloring. As a rule, colors which have been worn satisfactorily in youth may be worn in advanced years, provided they are grayed to keep pace with the increasing amount of gray in the hair. *To illustrate:* The bright brown which is becoming to the young woman with fresh, brilliant skin and auburn hair will be altogether unsuited to her when both skin and hair have faded. The color must be grayed to a dullness in harmony with them.

The sallow, gray-haired woman will find her best color in midnight and navy blues, warm grays, dull purple, or dull shades of red, but in each instance the effect is best if relieved by cream at the throat.

THE HAIR.—The various colors of human hair may be represented by different values and intensities of yellow and orange. Black hair is really a very dark brown. Red hair is a shade of orange rather than of red. Brown and yellow color schemes are always trying to yellow hair, since they are apt to make it appear dull and faded. Dark or middle color values are more satisfactory with black hair than lighter values which make a stronger contrast. Green makes red hair appear redder, while blue emphasizes the yellow in it.

THE EYES.—The range of colors found in the eyes includes tints and shades of practically every color in the color circle, and varies more than that of either the complexion or hair. Black eyes are really a dark brown, and may be either yellowish or orange in tinge, while brown eyes are higher values of the same hues. Blue eyes may vary in hue from that

of the violet tint to greenish, and in intensity from an almost neutral gray to deep blue. Hazel eyes are made up of flecks of blue, green, or violet according to which of these colors are placed near them. Eyes of light color are apt to appear weak and faded if intense colors are placed near the face. To strengthen the blue of the eyes and make them appear deeper, a blue of same general tone as the eyes but a little lower (darker) in value should be worn.

Choice of Accessories

To achieve style and taste in the ensemble, consideration must be given, first, to the dress and coat or suit as the foundation upon which we must build, and then, the choice should be made of the accessories, hat, gloves, bag, shoes or any other accessories that are necessary to complete the ensemble. Very few definite directions can be given regarding the use of accessories for any particular season, but a few general suggestions may serve as guides to aid in their selection.

Selection of Accessories.—Since accessories serve a useful as well as a decorative purpose in the ensemble, they must be chosen with this factor in mind. There are accessories for all purposes and occasions for general use and for informal and formal occasions—some simple, some more elaborate where one type definitely cannot be used in place of any other type. Accessories that are essential to an ensemble—bag, gloves, hat, shoes—should be selected first, and then those which are not essential but which are desirable, such as novelties—jewelry, belts, scarfs, and flowers—should be planned for last.

The selection of an accessory, then, depends upon its harmony in color, shape, and texture with the type of costume (tailored, informal or formal) with which it is to be worn. If the colors of the garments of the wardrobe are chosen carefully, one set of accessories may be used successfully for any daytime use and another set of accessories will serve for more formal occasions. In the selection of accessories, more restraint is necessary, perhaps, than in the purchase of garments. New

styles, novel textures, colors, shapes, and designs have such an irresistible appeal that we overlook the fact that they must harmonize with our other belongings. Restraint must also be practiced in the number of accessories used—one piece of jewelry or a flower added sometimes mars the effect of the whole.

Accessories may match the rest of the ensemble in color and texture or they may contrast in color, texture, value, or intensity.

Accessories may be used as color accents which may make the ensemble more interesting; they may be used to rejuvenate a dress that may prolong its use; they may be used to add emphasis and contrast; or they may help to achieve unity in an ensemble by repetition of color.

Restraint in the use of intense colors in accessories must be observed or a spotty effect will result.

The principles of design, line, and color should govern choices in selection of accessories. Scale or proportion must be carefully watched.

QUESTIONS

1. Describe the silhouettes that have been in fashion at various times.
2. The season's changes in silhouette are altered at three points. Show how this has been true for the past two seasons.
3. Explain the methods that are used to make a self-analysis of the entire figure.
4. Of what value is it for you to know in what classification of figures you are placed?
5. Describe the "ideal figure."
6. Give the variations that are liable to occur in various human figures.
7. Under which classification does the current silhouette fall at the present time?
8. Is the current silhouette favorable to you? How can you adapt this silhouette to your advantage?
9. Show how the fashion illustrators have used lines for showing costumes appropriate for: (a) Short, stout figures, (b) A tall slender girl.
10. List the principles or laws underlying the use of lines in designs.

11. Explain how unity of line in design may be unconsciously violated.
12. How can we be sure that our ensembles do not violate the principles of unity?
13. What is meant by harmony as applied to costume?
14. (a) Explain what is meant by rhythm in costume. (b) Give illustrations.
15. Tell how monotony can be avoided in the application of proportion.
16. Why is the principle of balance so important in the designing of costumes and textiles?
17. State the two methods of attaining balance in a costume. Illustrate.
18. Subordination is an important factor in good design. Why?
19. What precautions must be taken when trying to secure variety in design?
20. Explain how color may be used to emphasize the use of line.
21. How may color be used to create an interest in a costume?
22. Give suggestions for the use of areas of colors in good dressing.
23. How can color be used most effectively in planning or selection of ensembles?
24. Give examples of: (a) dominant harmony, (b) analogous or associated harmony, (c) complementary harmony, (d) contrasting harmony, (e) complex harmony.
25. Describe the effect of texture on color.
26. What is meant by restraint as a factor in good dressing?
27. Give illustrations where restraint in dressing has been successfully practiced.
28. List examples where accessories may spoil the effect of a costume.
29. Tell how good taste in dressing can be developed by the use of right accessories.

REFERENCES

- Baldt, Laura I., and Harkness, Helen D. *Clothing for the High School Girl*. J. B. Lippincott Co.
- Buttrick, Helen G. *Principles of Clothing Selection* (revised). The Macmillan Co.
- Dooley, William H. *Clothing and Style*. D. C. Heath & Co.
- Goldstein, Harriet I., and Vetta. *Art in Every Day Life* (revised). The Macmillan Co.
- Hempstead, Laurene. *Color and Line in Dress*. Prentice-Hall, Inc.

Hempstead, Laurene. The Selling Points of Apparel and Costume Accessories (Part II). Fairchild Publication Bureau.

Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress (revised). Houghton Mifflin Co.

Storey, Margaret. How to Dress Well. Funk & Wagnalls Co.

Trilling, Mabel B., and Williams, Florence. Art in Home and Clothing (revised). J. B. Lippincott Co.

CHAPTER 2

AN ANALYSIS OF CLOTHING NEEDS

The Value of Being Prepared.—Have you ever been made uncomfortable or unhappy because you could not accept an invitation to some activity about which you were especially keen? If so, was it because you did not have suitable clothing? Were you unprepared because you had not given enough thought to an analysis of your clothing needs?

To avoid such a misfortune in the future, the girls who wish to be appropriately clad for any occasion in their daily living should be interested in acquiring greater ability in estimating their clothing needs: should understand the principles involved in planning a wardrobe: and should know how to make the most of any clothing allowance allotted to them.

To Invoice a Wardrobe.—Each season before it is time to analyze and plan the clothing needs for next year's activities, one should assemble garments from storage spaces, such as attics, chests, and clothes closets. Examine all such clothing carefully. Divide the clothing into three separate groups and make a list (called an inventory) of them as follows:

1. Garments which must be replaced.
2. Garments which will last another season.
3. Garments which should be discarded by you.

This latter group should be separated into two other groups; for instance,

1. Those which are absolutely worthless—for your own family use—but which may be useful to others.
2. Those which may be used by some other member of the family or for household articles, such as hooked or crocheted rugs.

SUGGESTIVE OUTLINE FOR GENERAL INVENTORY

On Hand	Needed This Year	To be Purchased	To be Repaired	Cost New	Cost Repaired
1 coat 2 blouses	3 blouses 1 suit	1 blouse 1 suit	1 coat 2 blouses	\$ 2.25 30.00	\$1.00 .50

When a list has been made of garments, those to be replaced and those that may last another season, some method of combining, classifying, and checking up on needs may be necessary.

Classification of Wearing Apparel.—The following classification of wearing apparel has been used and is suggested here, not because any girl will need all these garments, but because it includes a wide range of garments and accessories that will meet the requirements of all girls; those with a limited clothing allowance as well as those with a more liberal allowance. The list may be used also to prevent the omission of needed garments and accessories.

Every person has individual requirements in regard to clothing. No arbitrary price list will exactly serve any two people. Prices are therefore omitted and a plan presented whereby the annual clothing needs may be estimated with accuracy by any individual girl. To use the list:

1. Check in column (3) all articles of every sort necessary to complete your clothing equipment for a full year and also for three years. Many articles may last three years, such as coats, suits.

2. Note in column (1) the required number of each article.

3. Enter in column (2) the total sum which you consider reasonable to pay for these particular garments.

4. In column (3) fill in the number of years you expect the garment to serve.

5. In column (4) compute from preceding entries the annual cost of each item.

6. The total of the entries in column (5) will be the proper amount to allot for clothing in making out your annual clothing allowance.

CLASSIFICATION OF GARMENTS AND ACCESSORIES

Type of Garment	(1) Number	(2) Cost	(3) No. Yrs. Wear	(4) Annual Cost	(5) Total Cost
<i>Outer Clothing</i>					
Winter coat.....					
Spring coat.....					
Sport coat.....					
Evening wrap.....					
Sweater.....					
Utility jacket (leather or wool)					
Rain coat.....					
Suit: Sport.....					
Dress.....					
<i>Dresses (Winter)</i>					
School.....					
Sport.....					
Street, church.....					
Informal.....					
Formal.....					
<i>Dresses (Summer)</i>					
School.....					
Sport.....					
Street, church.....					
Informal.....					
Formal.....					
<i>Miscellaneous Garments</i>					
Home wear.....					
Hostess.....					
Bathrobe.....					
Kimono.....					
Pajamas.....					
Skirts.....					
Blouses.....					
Smocks.....					
Gym. suits.....					
Aprons.....					
<i>Undergarments</i>					
Night gown.....					
Pajamas, sleeping.....					
Combinations.....					
Vests.....					
Panties.....					
Slips.....					
Step-ins.....					
Union suits (athletics).....					
Bloomers.....					
Bandeaux.....					
Sanitary apron.....					
Garters.....					
Garter belts.....					

Type of Garment	(1) Number	(2) Cost	(3) No. Yrs. Wear	(4) Annual Cost	(5) Total Cost
<i>Hats</i>					
Service, sports, berets, tams..					
Winter, dress.....					
Summer, dress.....					
<i>Foot Wear</i>					
Shoes: Service.....					
Sport.....					
Dress.....					
Sneakers (gym).....					
Rubbers.....					
Sandals.....					
Zippers.....					
Bedroom slippers.....					
Skating shoes.....					
Hose: Service.....					
Dress.....					
<i>Accessories</i>					
Gloves.....					
Umbrella.....					
Handkerchiefs.....					
Purses, bags.....					
Ties.....					
Jewelry: Beads.....					
Chains.....					
Pins.....					
Clips.....					
Scarfs.....					
Collars, cuffs.....					
Belts.....					
Flowers or decorative articles.					
<i>Miscellaneous Articles</i>					
Toilet articles.....					
Sanitary supplies.....					
Bathing suit.....					
Bathing cap.....					

The above list of wearing apparel may be used as a guide to show the various articles that one may need in the wardrobe. Subtracting the list of articles on hand from the clothes you should have will give you the list of garments needed for the year.

Factors Determining the Individual Needs for Garments.—Since determining the needs of each girl is an individual problem, it is necessary to know and understand all

the factors involved, before any girl can plan for her requirements.

The number and type of garments required by the individual girl will usually depend upon the following factors.

STANDARDS OF LIVING AS THEY AFFECT THE CLOTHING NEEDS.—The individual's opinion of his clothing need is apt to be determined by the family's attitude regarding the value of clothes as a social asset, as a means and measure of social advancement, and as meeting the demands of the community in which the family lives.

Standards of living for a family will depend upon what it has been accustomed to think as essential. Since this is due in great measure to the environment in which the family was brought up, no sacrifice is too great in order to live up to that standard.

THE ALLOWANCE FOR CLOTHING.—The amount that the family can allow depends upon: the family income, the number in family, the age and occupation of each member of the family. What has been your clothing allowance for the past year? The girl who has had a definite allowance will know just how much she can spend. The girl who has never had a definite allowance may either consult her mother for her planning or she may use her inventory of clothing on hand with an estimate of the cost to determine the probable allowance for clothing.

ACTIVITIES.—For a girl who is socially minded, more informal and formal dresses, wraps, and accessories will be required for teas, parties, and concerts than for a girl who goes out only occasionally. If a girl is athletically inclined and goes in for one or more sports, as skating, swimming, tennis, golf, or horseback riding, one or more sport outfits may be necessary.

If a girl is domestically inclined and interested in certain household tasks, it will be necessary for her to plan for enough appropriate garments to present always a neat and attractive appearance.

PERSONAL HABITS OF GIRLS IN CARING FOR CLOTHES.—How do you care for your clothing? Are you particular in daily care of clothes—brushing, airing, hanging up when taken off, cleaning spots at once, and mending all tears as soon as they occur? Are you careful about the storage of garments not in use? Some girls are quite careless; have lower standards in regard to appearance; are harder on their clothes; and would rather depend upon the chance of getting new clothes than to care for those they have.

When a girl changes her undergarments and night clothes daily and is in the habit of washing them herself, she will need fewer sets than if she puts them in the weekly family laundry.

The number of undergarments is also determined by the type. Tailored undergarments in practical fabrics will outwear flimsy overdecorated lacy garments. Three outfits should be sufficient to satisfy all practical needs, with perhaps one or two outfits of fine fabric, either tailored or simply decorated, for dress-up occasions.

SPECIAL NEEDS OF INDIVIDUAL MEMBERS OF FAMILY.—The requirements of dress, of course, vary with the demands of age, sex, and occupational needs. Good taste requires that each member of the family should dress appropriately for his status or position in the community. The mother with social or business obligation would require more of the clothing allowance than the young children. A girl at college would require more than a girl in high school, and a business or professional woman may spend a larger allowance for clothes than one in another occupation.

CLIMATE AND CLOTHING NEEDS.—Climate influences clothing needs in regard to the variety, number, and type of garments needed. In cold countries there is a demand for more and warmer clothing to provide the necessary warmth. The expense, therefore, is greater because of the initial cost of fabrics, the amount required, and the difficulty and expense of upkeep. Warm climates require clothing of a different

type. Light, cool colors of a fabric with lower initial outlay are less expensive and less difficult to keep clean.

Seasonal differences in the temperate climates require the purchase of two types of clothing; one adapted for warm weather, the other for cold. This must be considered in listing the wardrobe needs.

COMMUNITY LIFE REQUIREMENTS.—The requirements for community life vary with location. The girl in a city requires a different type of clothes from those of a girl in a town or village. More informal types of clothes can be worn on village or town streets. Also, a greater variety is required because of the close association between individuals in a small community. Street costumes of a semi-tailored type are more appropriate for the city. The number of formal or informal dresses will depend upon the girl and her activities.

Classification of Individual Wardrobes.—Wardrobe suggestions for girls with varying social needs are listed below.

FOR THE GIRL AT HOME.—For the girl who resides at home and is not socially inclined, the wardrobe would center on clothing adapted to home life. Although practical clothing will predominate, it should not lack interest and charm:

- 4 house dresses
- 1 suit or dress coat
- 1 sport coat for service
- 1 raincoat
- 2 afternoon dresses suitable for teas, church, etc.
- 1 street dress
- 1 service hat and 1 dress hat
- 1 sport outfit
- Lounging clothes, such as colorful pajamas and hostess dresses

FOR THE GIRL AT HOME ENGAGED IN SOCIAL ACTIVITIES.—A girl socially inclined would place the emphasis on informal and formal gowns rather than practical home garments:

- 1 dressy fur-trimmed coat
- 1 sport coat for winter
- 1 sport outfit for summer and one for winter

- 2 black afternoon gowns
- 1-2 colored afternoon gowns
 - 1 dinner gown that can be transformed into an evening gown by removing the jacket. Any fashionable becoming color may be used
- 2-3 formal evening gowns
 - 1 evening wrap
 - 1 service hat and 1 dress hat
 - A selection of daytime set of accessories that will harmonize with all costumes and one set of evening accessories

FOR THE BUSINESS GIRL.—Preferring quality to quantity, the business woman reduces her list to the real necessities:

- 1 dressy coat, fur-trimmed
- 1 service coat
- 1 raincoat
- 2 business outfits. She chooses her business dresses first.

It might be well to allow herself never less than two dresses (both tailored), for there must always be one to wear while the other is at the cleaner's. One of these may be of wool jersey and the other of tweed similar in type. Since one hat must serve for both dresses, she will choose dresses of the same color or in two tones of the same hue.

Often it is impracticable to change apparel before going out to dinner or the theater, and this means that the business woman must include in her wardrobe a "dress-up" frock that will not look out of place behind her desk. By adding accessories which are appropriate, she will feel well dressed.

The coat is the last garment to be chosen because it is important that it should harmonize with all her dresses. Black sets off every color charmingly, and is always in good form.

Accessories can then be selected to harmonize. It would be necessary to have at least 2 pairs of gloves, 2 pairs of service shoes, 1 pair of dress shoes, a purse or bag for daytime and a dressy type for evening, and 6 pairs of stockings. Hosiery should be selected with care. The textures should be examined to ascertain the wearing qualities. A woman will consider the length, because she knows there is a difference in

lengths even in the same size number. If the stockings are too short, there will be undue strain at the knee causing a break at that point.

While on most occasions it pays to purchase durable fabrics, there are times, due to fleeting fashions, when it is wiser to purchase the cheap or inexpensive fabric. One can always purchase economically by selecting conservative clothing.

FOR THE GIRL AT SCHOOL OR COLLEGE.—The requirements vary depending upon the social life of the school; the types of activities (recreation) provided; its location (climate); and its nearness to a large town or important city. The clothes for campus and classroom wear should be serviceable and plain, and provision should be made for seasonable clothing:

- 1-2 tweed suits
 - 1 linen suit
 - 1 sport coat
 - 1 dress coat, fur-trimmed or fur
 - 1 raincoat
 - 2 wool shirt frocks
 - 2 tweed skirts with contrasting tie silk blouses
- 2-3 silk dress-up dresses
 - 3 evening dresses; 1 very formal
 - 1 evening wrap
 - 2 lounging robes or pajamas
 - 1 winter bathrobe, 1 summer bathrobe
 - 1 sport or service hat
 - 1 dress hat
 - 2 pairs of sport shoes
 - 2 pairs of dress shoes
 - hosiery—4 pairs of service, 4 pairs of dress
 - 1 pair of evening slippers
 - 1 purse or bag for daytime
 - 1 evening bag
 - 2 pairs of dress gloves
 - 2 pairs of wool gloves or mittens

Standards for Practicing Thrift.—Thrift in dress means an economical management of the clothing allowance. To insure success in this venture you will be obliged to know worth-

while standards in order to use them in your comparative evaluation of garments and accessories.

The following suggestions may aid in promoting thrift in selection and use of clothing:

1. Plan the purchase of essentials first, omitting non-essentials. The needs will then be satisfied before wants.
2. In replacing articles, choose materials, garments, and accessories which will harmonize with the rest of the wardrobe. It will be wise to limit the number of colors. Select garments and accessories which can be worn in a double capacity. Do not buy two hats, bags, dresses, or coats where one will serve the same purpose.
3. Plan purchases carefully; know what you need to buy; know how much you can afford to spend; and buy the best you can afford. One good garment outwears two cheap ones and it will be presentable throughout its period of service. It will keep its shape, will require fewer repairs, and can be pressed many times.
4. Choose good materials for garments which are to receive hard wear, such as suits, everyday coats, dresses, and hats. Materials that have been standardized are reliable, attractive, in good taste, and never go out of style.
5. Buy clothes after the rush season, as advance styles are always expensive. Avoid novelties or fads.
6. Take time to select designs that are conservative in style, color, and line, appropriate to use and suited to your personality. Such garments can be worn as long as the materials last without making over because they are not extreme in style. A good serviceable costume will look well for three years, provided it is not extreme in style, that is, not too long, too short, too full, or too scant.
7. Plan to save on summer clothes in order to have plenty of money for the more expensive winter garments.
8. Home sewing, repairs, pressing, and construction of clothing is worth while if it does not take time that might be more profitably given to self-improvement, advancement, or needed recreation.

Construction of clothing at home and care in the upkeep will enable one to have a greater number of more individual garments of better quality than would otherwise be possible. However, time, good style sense, and technical ability are necessary in order to construct garments of profit to the home sewer.

9. Conserve materials by using what you have that is in good condition. Use materials that are suitable for undergarments, garments for younger children, or for some household use. Attractive garments may often be constructed by using renovated material in combination with new materials, if care is taken in the selection of a suitable pattern.

Factors Affecting the Service of Garment.—The service obtained from wearing apparel or a particular garment is due to the habits of personal cleanliness and the thought which each person gives to the daily and occasional care of his clothing.

Check up on the following outline to see if you would rate 100% in your care of clothing:

1. Airing of garments when not in use.
2. Proper hanging of garments when taken off.
3. Care of coats, suits, and dresses by brushing; removal of spots; mending of rips or tears; replacing buttons, hooks, and eyes; use of removable linings; methods of preventing perspiration; pressing.
4. Arrangement of clothing in closets, drawers, and chests when not in use.
5. Methods of folding, hanging, covering, and storing between seasons; protection from moths and dust.
6. Home cleansing or commercial cleansing before garments become too soiled for successful cleaning.
7. Care of shoes, cleaning, brushing, polishing of leather, and following of expert advice for cleaning of white canvas, suede, and buckskin shoes. Do you keep two pairs of shoes for alternate wearing? Do you protect your shoes from moisture by wearing overshoes or rubbers? Do you walk correctly to preserve the shape of shoes? Are you particular in regard to repair of shoes, run-down heels, and breaking of arch?
8. Care of hosiery. Do you wash them at once when taken off? Darn at once when needed?

9. Care of undergarments. Do you wash silk undergarments as soon as removed? Do you change underwear daily?

Standards for Judging Materials and Workmanship.—These standards will be found to vary according to the needs of the customer.

PRICE GROUPS.—High-priced wearing apparel should mean the finest in quality in its production, in its care, handling, and sale to the consumer. This would include: (a) high quality of raw materials, (b) high-grade workmanship, (c) intelligent service, (d) business courtesies, (e) good will or reputation of the shop for fair dealing.

These factors are not considered of importance in less expensive clothing when consumers buying the article are able to discriminate between qualities. If the consumer buys the cheaper grade through necessity, he must carefully analyze the quality of the garments and the conditions (services) under which they are sold, and be able to estimate whether quality or services, or both, have been sacrificed. Factors which should be considered are: (a) style, (b) quality, (c) workmanship, (d) value, (e) price, (f) services.

CONSUMER REQUIREMENTS.—Of course all these factors are not considered important by all consumers. Some consumers look for style regardless of quality, workmanship, or service. The group that demands style may be considered as: (a) Ultra, the group that demands the newest, the extreme, or the style that attracts attention to them when they wear it. (b) The exclusive style is demanded by those who are particular and are able to pay the highest prices and who, therefore, require styles that will not be worn commonly. (c) The popular style is one that is in demand by most people and is easily discarded. (d) The conservative style changes little from season to season, is not extreme, and may be worn without attracting undue attention. (e) A staple style is one that may always be worn, such as a tweed suit.

DEFINITION OF TERMS.—Quality refers to the best wearing apparel in regard to fabrics, trimmings, workmanship, and

finish. Quality garments are always superior and higher in price.

Workmanship or tailoring refers to the method of construction—the way a garment is put together—by hand, by machine, or both. High-priced garments are generally finished by hand.

Value refers to its real worth, excellence, and usefulness to purpose.

Price refers to the cost that the consumer pays.

Service refers to the conditions under which the garments are sold. It may include: highly trained salespeople to show garments; well-equipped shops for display of garments, such as easy chairs; figures and manikins to display models; racks to be placed before customer; privilege of charge accounts; boxes for packing and delivery of articles; deliveries for approval, etc. All of these services must be charged to the selling department and are, therefore, passed on to the consumer.

Standards for Buying Fabrics and Garments.—Look for labels which tell you definite facts about the merchandise. If the terms are new to you inquire their meaning or, better still, borrow a book on textiles from your nearest library and look it up. You will be interested if you learn more about fabrics.

QUALITY GARMENTS.—Standards are too numerous to be marked on all garments or fabrics. Also, consumers vary in requirements for clothing as well as in their knowledge of, and in their values of, standards in merchandise.

The clothing industry which produces millions of dresses each season endeavors to meet the requirements of all classes of consumers. Some people may desire to secure an evening costume to wear at one or two of the leading affairs of a small manufacturing community. Style, line, and color are the three important factors—durability is not a prime consideration. A fifteen-dollar dress constructed of weighted silk and stitched by machine with cheap construction is more economical for them than a fifty-dollar costume of pure silk with high-class construction and fine hand stitching. While fine style,

high-class workmanship and quality fabrics would be an excellent standard for one who frequently attends social functions, it is not the best standard for one who goes but seldom.

Few of us are expert judges of fabrics or the types of processes used in the construction of garments. Many of the labels attached to fabrics and ready-to-wear garments give little help, and although some merchants and salespeople are conscious of consumer demands for information regarding the merchandise they sell, others have little definite information about the quality of their merchandise.

CAUTIONS IN BUYING FABRICS AND GARMENTS.—These days most home-makers are trying to buy fabrics that will wear well. Price is no indication of the quality of the fabric in a garment, so we must know how to judge the wearing quality of many fabrics. Look first at the construction of the fabric. The simpler the construction, the more durable the fabric is liable to be. Novelties in weave, in kinds and sizes of yarns, and in combinations of different fibers usually prove unsatisfactory and are poor buys. A plain over-and-under weave, with yarns of equal size both in warp and filling threads, and having the same number of threads per inch in both warp and filling (called the construction), produces a balanced cloth. Durable fabrics vary as little as possible from this construction. If the yarns in one direction are heavier than those in the other direction, the finer yarns may break. Yarns which are uneven in their construction break readily at the thin places. Heavy places in yarns and heavy cords wear through a finer yarn at the point at which they cross.

The yarns of a strong, well-made fabric are not easily drawn out of place. Pull the material between your hands and note the strength and slippage of the yarns. Sleazy fabrics will pull at the seams and are not durable. Yarns that are not firmly fastened in the fabric or "float" across a number of yarns will catch and pull out easily. "Pick" at the yarns and pull them gently, to see how well they are fastened.

SECONDS.—Some fabrics are on bargain counters because they are "seconds." That means they are not perfect. Their

flaws may be large or small, important or unimportant. A "second" offered at a lower price is worth buying, if its flaws do not decrease the value of the fabric for the particular use the purchaser intends to make of it. Bargains should be examined carefully with these points in mind to be sure they will wear well.

WEIGHTED FABRICS.—Many fabrics are heavily weighted and highly finished to make one believe that they are of better quality than they are. Metallic weighted silks are difficult to distinguish from pure dye silks, and since overweighted silks split readily at seams and wear under friction, test carefully before buying. Learn to distinguish between the feel and appearance of weighted and pure silk in fabrics.

RAYONS.—These fabrics are sometimes finished to give the appearance of wool and silken fabrics. It is necessary to know and classify these fabrics, since their characteristic qualities need to be considered in their care and cleaning.

SHRINKAGE AND STRETCHING.—Very crinkly crepes stretch and, if thin, sometimes draw up and shrink. This is an important factor to find out when buying a dress.

To Judge the Quality of the Construction of a Dress.—Good quality dresses last longer and look better because the cut of the dress and the better quality of fabric insure that it will keep its shape even after many times of wearing, cleaning, and pressing.

THE CUT.—In a quality dress every section of the dress is cut on the correct grain of the fabric. Low-priced garments are often cut off the grain and crosswise grain in order to use less yardage. Examine the grain carefully, especially the sleeves, collars, and applied pieces. Although the inexpensive dress may appear as well made as the better grade at first appearance, dresses which are cut off grain will sag, ripple, and draw out of shape when worn.

SEAMS.—Look at the inside of the dress and be sure that the seams are wide throughout and especially around the

armscye. In a good quality dress seams are finished in a way that is appropriate for fabric. Well-constructed seams are of uniform width, with size of thread and length of stitch and tension well adjusted and adapted to fabric.

SIZE OF GARMENTS.—Do not buy garment by size because, although manufacturers use standard measurements, dresses size up differently when produced. Try on all dresses, for different styles give different effects. Two dresses of identical bust measures will vary in many ways. One may be too short, too tight at hips or width of back, and sleeves may be tight at cap and too short or too long.

PLAITS, DARTS, TUCKS, AND GATHERS.—Pull the plaits and gathers apart to see if they really add fullness. Do the plaits hang straight and not open up when sitting, walking, or standing? Is the dress full cut with plenty of room?

HEMS.—Look at hems to be sure that they are sufficient for lengthening the dress if necessary when styles require a longer garment. Is the dress constructed at bottom in such a way that the dress cannot be lengthened if material shrinks or styles change?

NECKLINE FINISH.—Has it been stretched in making? Does the neckline fit smoothly and lie flat around the neck? Is the binding or facing cut on the true bias so that it will always keep its place?

PLACKETS.—Look at the placket and be sure that it has not been stretched in construction. See that it is long enough for ease in putting on and taking off the dress. Low-priced dresses sometimes have the plackets so short that it is difficult to get in and out of the dress.

DETAILS.—Are the fastenings well placed and securely fastened? Quality dresses have reinforcements where buttons are sewed on—either a piece of fabric or a tiny button. Are all snaps securely fastened, each by itself? In low-priced garments the thread extends from one snap to the next.

EXAMINE EDGE STITCHING.—Is it uniform and close to edge?

QUESTIONS

1. What values may you expect as you gain in experience of estimating your clothing needs?
2. State the principles involved in planning a wardrobe.
3. Explain how you can be sure you are estimating your needs correctly.
4. List the steps you would take in making an inventory of the clothing you have on hand.
5. Estimate your clothing needs for the current year and make out a personal list.
6. Explain how to determine the number of coats, dresses, undergarments, and accessories to buy each year.
7. Does the classification of wearing apparel given in this chapter meet your needs in making out your personal list? If not, make a classification that seems best for you.
8. (a) List the factors that determine the individual needs in regard to clothing. (b) Do you consider these factors of equal importance?
9. Why should a high-school girl's needs for clothing differ from those required by a college girl?
10. Explain the important factors which determine the needs for a business girl's wardrobe.
11. (a) Give illustrations which you think explain why it is sometimes better to purchase less expensive fabrics for clothing. (b) When is it wise to buy durable fabrics?
12. What is meant by thrift in clothing?
13. (a) List at least six standards which it is necessary to know in order to buy clothing wisely. (b) Give your reasons for choice of six.
14. (a) Explain the necessity for the daily and occasional care of clothing. (b) What effect does this care have on your clothing needs?
15. What causes the differences in price between the low-, medium-, and high-priced clothing?
16. (a) List the factors that should be considered by consumers when selecting ready-to-wear garments. (b) Explain the meaning of each factor.
17. What is meant by: (a) ultra style, (b) exclusive style, (c) popular style?
18. Describe the standards that should control the buying of fabrics and garments.
19. Write a few paragraphs in explanation of reasons for caution in buying fabrics.

20. List the points to look for in judging the qualities in dress construction under the following headings: (a) cut, (b) seams, (c) neckline finishes, (d) plackets, (e) hems. In each case give reasons for the necessity of checking up on these points.

REFERENCES

- Baldt, Laura I., and Harkness, Helen D. *Clothing for the High School Girl*. J. B. Lippincott Co.
- Buttrick, Helen G. *Principles of Clothing Selection*. The Macmillan Co.
- Donovan, Dulcie G. *The Mode in Dress and Home*. Allyn & Bacon.
- Friend, Mata R. *Earning and Spending the Family Income*. D. Appleton-Century Co.
- Harris, Florence, and Huston, Hazel. *The Home Economics Omnibus*. Little, Brown & Co.
- McGowan, Ellen A., and Waite, Charlotte A. *Textiles and Clothing*. The Macmillan Co.
- Rathbone, Lucy, and Tarpley, Elizabeth. *Fabrics and Dress*. Houghton Mifflin Co.
- Todd, Elizabeth. *Clothes for Girls*. Little, Brown & Co.
- Trilling, Mabel B., and Williams, Florence. *The Girl and Her Home*. Houghton Mifflin Co.
- Van Duzer, Laura, and Others. *Everyday Living for Girls*. J. B. Lippincott Co.

CHAPTER 3

SHOPPING

Woman's Responsibility in the Expenditure of the Family Money.—It has been estimated that women spend 85% (more or less) of the family income, and as a result of this the economic independence of the family depends to a great extent on the efficient spending power of the woman. Therefore, for efficiency in spending, women should be trained not only to spend their money economically but, also, to have an understanding of the social and economic factors involved in its spending.

Since the neighborhood store and the retail dry goods store, sometimes called the department store, are very important parts of the shopping community, it is important that every woman who purchases should have an understanding of the relationship existing between the store, the individual, and the community, as well as an understanding of their dependence upon each other.

Retail Stores.—The final sale of textiles must naturally be in small units. Since most wholesalers tend to specialize, it is natural that there must be some agency that will bring together textiles of all kinds, where they can be disposed of in small quantities. The retail dry goods store has undertaken this task.

"Dry goods" is a popular term in the United States for textile fabrics and related articles of merchandise, as piece goods, notions, trimmings, ready-to-wear garments, millinery, and accessories, in distinction from hardware, groceries, and men's furnishings. The term "dry goods" as used exclusively in the United States is not, as generally supposed, of American origin. The first recorded use of the term "dry goods," to describe textile fabrics collectively, occurred in a report to the

English House of Commons in 1745. In England, Ireland, Canada, and other British colonies the term "drapery" is used to describe textile fabrics as a group.

Department Stores.—A department store is a retail store in which the different lines of merchandise kept for sale are displayed in separate departments, and which, so far as local conditions permit, aims to supply all the material wants of its customers. In the large establishments of this character a buyer and a force of salespeople are employed for each separate department, and the volume of business transacted, profits, losses, overhead (advertising, display, delivery) in each are kept in separate accounts.

Relationship Between Store Personnel and Customer.—While department stores differ in their management, size, and policies, the organizations are somewhat similar. The officers and workers (called personnel) consist of the president, vice-presidents, controller, and general manager (the board of directors). The merchandise department consists of general manager, executive vice-presidents, merchandise councilors, buyers, and sales force. While the officials of the company look after the financial standing and policies of the store, it is the buyers and sales departments that come in immediate contact with the customers.

One of the most important factors which contribute to the success of any store is the personnel of the salespeople who are in direct contact with the customers. The relationship between the customer and the salespeople who are directly responsible for seeing that the public receives the courtesies extended by the store, sometimes becomes strained and unpleasant. There are certain principles of right conduct and rules for behavior which may serve as guides when shopping.

Shopping Ethics and Courtesies

Shopping Ethics.—The same courtesies should be extended to the salespeople that you ordinarily show in your daily intercourse with others. In shopping, any number of situations

occur which are aggravating and which need courtesy and not impatience. For successful purchasing of clothing it is necessary to have a definite plan or some idea of the purchases you wish to make, in order not to waste the time of the salesperson by indecision. A list made when planning a shopping trip would aid in establishing the right relations and would insure good service from the salesperson.

Take advantage of the early shopping hours whenever possible, for that is the time when you will get better and unhurried service in any shop. Late shopping adds to the discomfort of all concerned and, due to the fact that a large force is required for the crowded hours from 2 to 5:30, the merchant is put to greater expense, which is, of course, passed on to the consumer.

There has been an effort on the part of department stores to spread the peak of trade from the heavy days to Monday, for example, and the early days of the week, by announcing special sales for those days. Some shops have two-hour sales during the slack time in order to attract people to the stores during those hours.

If the sales could be equalized, better service would be secured for all with less expense to the management for added salespeople.

Ways in Which the Consumer May Cooperate with the Store and Its Salespeople.—Aimless shopping, usually with no intention of purchasing, should be avoided. Some stores allow commission after a certain amount of sales, so that if you take a girl's time by aimless shopping you are really lowering her weekly wage.

Taking the time of a salesgirl to show you a line of merchandise and then later purchasing from another salesgirl should be avoided. Comparative shopping where you are looking around to find the best values is legitimate, but you must explain that you are doing this. Do not turn away abruptly.

Do not handle goods placed for display on counters or racks, and do not ask the salesperson to take articles from showcases unless you are sure they are likely to be satisfactory. Giving

detailed information regarding purchases you wish to make will enable the saleswoman to give you quicker and better service. For instance, in purchasing ready-to-wear garments explain what type you need, whether for school, afternoon, or evening, the color preferred, the estimated size, and also state the price you wish to pay.

Perhaps a saleswoman will notify you of courtesy days, that is, days when you can purchase before the public sales take place. In that case the saleswoman who notified you is entitled to the sale, providing you purchase.

Requests for samples, unless you really intend to purchase from them, should be avoided.

In addition to knowing what to buy, one should know where to buy. Some stores carry a better line of goods for your purpose than others. Better designs in silk may be bought in one store, lace may be a better buy in another, and at certain times and places cottons are better.

We often become impatient when a customer is taking what seems to us an unlimited time to make a purchase. Do we wait patiently for our turn, or do we expect the saleswoman to wait on us regardless of other customers? Do not become impatient with the saleswoman when she is entering her sales, as all salespeople are required to do this immediately after a sale.

Careless purchases, returning goods, and requiring delivery of articles so small that they can be carried easily without trouble add to the expense of the store, which is again passed on to the consumers.

Charge accounts are another privilege extended to customers. Are you sure you do not abuse the privilege sometimes due to carelessness?

Courtesies Extended by Stores.—There are various services and courtesies offered to the modern consumer which greatly simplify his shopping difficulties. Some of these are listed here, dealing with delivery of merchandise, exchanges, and methods of payment.

DELIVERY OF MERCHANDISE.—All stores, with the exception of those whose business is based on the “Cash and Carry, or Take It With You” system, have regular delivery systems of some kind. Some are more extensive than others. A number of shops may form an association and deliver merchandise under one trucking system. Other stores have their own systems and each section of the city or suburban district has its own delivery trucks. In some cases depots are located in suburban districts from which all deliveries are made for that section. Before the merchandise can be placed on the trucks it is packaged, checked, and rechecked by the personnel of the delivery department. To this expense must be added the cost and upkeep (replacements, gasoline, oil, servicing, and care) of trucks. Each truck on its route has two delivery men because no truck should be left standing alone (due to insurance laws) when packages are delivered to customers. The consumer eventually pays for the expenses of delivery service, for it is charged to the department selling the merchandise and becomes part of the overhead charges of the department. Since the overhead charges are added to the price ticket, the consumer, not the store, is the one who pays. In regard to the special delivery of merchandise, all consumers share this expense. It is advisable to take small parcels yourself and help reduce the expense by cooperating for the reduction of delivery charges.

RETURNS AND EXCHANGES.—The returning of merchandise on the part of the customer is one of the most serious problems of the retail trade. The shops have been forced to limit the time for returning goods to a few days (3 to 7), since in many cases they were retained for weeks and then returned. It sometimes happens that the customer through careless handling destroys the freshness of the merchandise. For instance, a dress when sent from the shop has been carefully packed with plenty of tissue paper. The customer returning it is not as expert in packing, hence the store must have it repressed and put back in condition for resale. This is another expense paid for by all customers. The merchant is helpless, since these abuses usually occur on charge accounts.

METHODS OF PAYMENT.—Clothing may be purchased for cash or by deferred payments, such as charge accounts, or by instalment (sometimes called budget accounts).

CASH PAYMENTS.—Paying in cash is an advantage to the consumer for one is more apt to plan, compare values, and buy more carefully, and it is annoying to be obliged to pay for merchandise after it has been in one's possession for some time.

If cash is paid, the merchant is able to take advantage of trade discounts by buying for cash, and these profits can be passed on to the consumer.

Disadvantages. A person may be careless with money and it may be lost from the purse. Then, too, money may not always be available. Also, more accurate accounts of expenditures will have to be kept in order to account for all that is spent.

CHARGE ACCOUNTS.—Another courtesy extended to customers is the deferred payment plan through charge accounts. These may establish your credit in a community and be an advantage if you need a reference. They are also an easy means of keeping a record of expenditures, as well as helping to avoid carrying surplus money in one's purse. One may buy merchandise when needed, rather than having to wait until cash is available.

It is easier to return merchandise which has been charged. While this is an advantage to the consumer, it is a disadvantage to the merchant.

Disadvantages. It is very easy to say "charge it," but there is the danger that many unnecessary purchases will be made. The consumer pays higher prices in a store where the privileges of charge accounts are extended, and the expenses of the merchant are thereby increased. If payments of charge accounts are not made promptly, the merchant loses his trade discount by not making cash payments. The merchant also loses by bad accounts, since many of his charge accounts cannot be collected. The store has to maintain a credit department for the collection of accounts. These charge accounts

also encourage the return of merchandise and the abuse of sending goods on approval.

INSTALMENT BUYING.—Buying clothes on the instalment or budget plan may be an advantage in some instances, but it should depend upon the necessity of securing such garments immediately. It is generally considered poor policy because the final cost is excessive. It encourages unwise spending, and if these garments are worn out before complete payment is made, one will always be in debt, the same plan of purchasing having to be continued indefinitely.

The retailer may be obliged to charge too high a percentage for the service of financing due to the following: to cover the risk of loss before the final payment is made; loss of interest on invested capital; and the added expense of collecting separate time payments, because of the bookkeeping involved. All of these factors cause an increase in cost which the merchant must add to the purchase price. A better plan is to consider before the need arises, save for it, and avoid the needless worry that deferred payments are sure to cause.

Relationship of Store to the Community.—The store in any community performs certain functions. These functions, of course, vary according to individual necessity.

COOPERATION.—There is need of cooperation between the retail store and the consumer, for they are dependent upon each other in all their relations. The consumer is dependent upon the merchant to furnish the merchandise at a price he can afford to pay, and the merchant is compelled to provide the standard of merchandise demanded by the consuming public.

The retail merchant, who is in close contact with the consumer (by means of the buyers and salespeople), acts as intermediary between the producer or manufacturer of merchandise and the consumer. The success of any retail store is determined: (1) by the ability of the buyer and salespeople to interpret the needs and wants of the consumer; (2) by the ability of the retail merchants and buyers to pass this informa-

tion on to producers of merchandise; and (3) by the ability of the producer to meet the demands of the trends of trade as indicated by merchants.

Classes of Merchandise.—Wearing apparel may be divided into two groups: (1) unlabeled products, that is, without name or other symbol; (2) products with trade-marks, brands, or labels.

TRADE-MARKS.—The trade-mark is a term used to designate any mark, name, or other device used by producers or manufacturers to distinguish their own merchandise from that made by others. A manufacturer may register his trade-mark with the United States Government by paying a fee of \$10 to protect it from use by others for an indefinite period.

VALUE OF TRADE-MARKS.—The value of some sort of identifying mark on a product has been demonstrated. Therefore, some producers, in order to stimulate a demand for their products, have marked them with a definite trade-mark or brand. Experience proves that it is desirable to have the manufacturer's name on his products for two reasons: (1) the manufacturer is the only person who knows the exact quality of his merchandise; (2) no manufacturer will put a distinguishing mark or brand upon his products unless they meet all standards of quality. A manufacturer cannot afford to trade-mark, name, or brand his products unless they meet the standards claimed for them. This responsibility, if the goods are unsatisfactory, can be placed directly upon the producer.

STORE NAME.—Some merchants do not care to sell branded products and, therefore, use their own trade name on merchandise which they either manufacture themselves or have made for them under their name and guarantee. In the latter case they must meet definite specifications in regard to quality and workmanship.

UNLABELED PRODUCTS.—Other merchandise without label, name, or brand of any kind is often placed on the market by retailers in order to increase their business. This gives the

consumer an opportunity to buy cheaper and lower quality merchandise in order to meet his needs. Trade-marked products, in order to keep up their standards of quality, are higher in cost to the producer and higher in price to the consumer.

LABELS.—A label is a small slip of paper or other material attached to merchandise and other commodities in order to furnish accurate, important, and reliable information concerning the quality of the product to which it is attached. To be of value, labels must state such facts as textile content, that is, mixtures of cotton and linen, wool and cotton, silk and rayon, the fastness of dyes to laundering, perspiration, and sunlight, the weighting or dressing, and the amount of shrinkage to be expected. These facts aid the consumer in buying with more satisfaction both to himself and the store.

The demand of consumers for lower-priced fabrics and garments has resulted in the adulteration of fabrics not only by the substitution of lower-priced fibers for more expensive ones, but by the use of finishes which are also deceptive. (Consult Chapter 4.)

Textile Testing.—Some department stores have installed textile-testing laboratories where goods purchased are scientifically tested so that the store may know exactly what guarantees and claims can be made for the merchandise. Fastness to laundering, with actual directions for same, is given. Some labels also state whether a fabric is washable or not, and sometimes the percentage of shrinkage is placed on the label. Pure dye or weighted silk is always indicated, and fabrics containing acetate are generally so labeled. There are, therefore, some indications that merchants are alive to the necessity of helping customers buy the qualities of fabrics they are seeking.

In addition to the (a) trade name and (b) technical description of products, it is necessary (c) to know the reliability of stores or firms and (d) to have some knowledge of the reliability of the advertising medium. Some dry goods stores and mail order departments have a testing laboratory for

clothing, and the specifications are compared to well-known standards. Many advertising media, such as well-known magazines, have testing laboratories and will not advertise products that are not up to a certain standard.

Advertising

Classification of Advertising.—Advertising may be classified as: (a) general, (b) local, or (c) direct. General advertising is directed principally toward making the public familiar with a product, calling attention to its excellent qualities, and thus bringing about a demand for it. Most products with trade names or brands, which are nationally or internationally

Prior-To-Inventory

Stock-Clearing Sale!

Offering Greater Savings

For Quick Disposal!

Men's Suits
Overcoats

Regularly Up To \$45

now \$27.50

FIG. 12. An Advertisement Showing a Type of Sale—Stock Clearing

advertised, come under this heading. Local advertising is usually carried on by the retailer for the purpose of calling the attention of consumers to wearing apparel and other commodities, in an effort to induce them to purchase. Direct



One of the Most Spectacular Purchases Ever Made
by Our Century Famous White Goods Departments!

68,160

FINE MUSLIN, SLIGHTLY IMPERFECT

SHEETS, CASES

Twin or $\frac{3}{4}$ Size, 72x108 } **79^c**
Large Full Size, 81x99 }

If Perfect, Would Be \$1.29

Look at the Savings on All These Additional Sizes!

SINGLE SIZE 63x98" **69^c** LONG, FULL SIZE 81x108" **96^c**
If perfect \$1.19 If perfect \$1.44

TWIN or $\frac{3}{4}$ SIZE 72x99" **69^c** WIDE, FULL SIZE 90x108" **\$1.09**
If perfect \$1.19 If perfect \$1.59

CASES, 42x36 **22^c**
If perfect, 32c

CASES, 45x36 **23^c**
If perfect, 33c

MAIL AND PHONE ORDERS FILLED ON \$1. OR MORE

Fine Muslin sheets are a sound buy. But when you can buy them at such low prices you should stock up at these savings! What if they have tiny imperfections? The oil stains wash out, the occasional threads don't impair the wear ... and they bring you value far more than your money's worth!

FIG. 13. A Simply Worded Advertisement

advertising may be a personal appeal to a customer by means of pamphlets, circular, or radio broadcasting, which calls attention to the qualities of an article in the hope that he will be interested and buy.

Evaluation of an Advertisement.—In order to evaluate an advertisement, one should know: (1) the types of sales, (2) the value of simply worded advertisements, (3) whether the advertisement is an appeal to the emotions, or (4) whether it is high-pressure salesmanship. (See Figs. 12, 13, 14, and 15.)

The types of sales give a well-defined meaning to a customer. Notice advertisements announcing: (a) bargain sales due to overproduction, which mean that the commodities to be

THOROUGHbred!

CASUAL FROCK

in Striped Rayon Sharkskin

5.98

Fresh as the first balmy day of spring, this trim striped frock is a thoroughbred of precision tailoring combined with feminine softness! From its moulded shoulders to its flaring skirt, it's the perfect casual frock for North and South, for now and all spring! Of crisp woven rayon sharkskin in your favorite peppermint-stick stripes. Black, navy, green, red with white. 12 to 20.

FIG. 14. An Advertisement of a Dress That Is an Appeal to Emotions

sold are at less than the retail price, usually at cost price or one-third off; (b) seasonal sales, such as January sales or after Christmas sales, which mean that left-over clothing will be sold at less than retail price, usually a third or less; (c) special sales, which are offered to the public when the store has purchased the overproduction of a mill or a clothing factory. The prices are usually as low as one-third to one-half the regular price.

Competition.—Every store has special bargains, which are a form of advertisement to attract customers to the store, so that in addition to the bargains they may purchase other articles at a retail price.

In order to understand an advertisement it is necessary to have a background of the technical terms and expressions

GOING... GOING... *Don't miss out!*
SALE ENDS SATURDAY

**FINAL
CLEARANCE**

\$4.65
\$5.85

CHARACTER SHOES

Shoe prices will be higher this Spring... so
buying now means double savings. All new styles.
All standard quality from regular stock.

FIG. 15. A High-Pressure Salesmanship Advertisement

which occur so often as selling points in advertisements; for example, trade names, meanings of such terms as pure dye silk, weighted silk, virgin wool, worsted yarn, double damask, lisle thread damask, full-fashioned hosiery, acetate, etc.

To illustrate: The expression "pure dye silk" is used as a selling point for silk fabrics which do not contain more than 10% of any substance other than silk and which have no metallic weighting. Black, however, may contain up to 15%. This definition is a ruling by the Federal Trade Commission.

"Virgin wool" is wool from the live sheep's back.

"Worsted yarn" is yarn that has been carded and combed and is also made of virgin wool.

Double damask has a distinct dull background on one side and a distinct satin background on the other. The single damask is very nearly the same on both sides.

Lisle thread damask is made of a cotton yarn that has been singed and often mercerized and has a permanent luster. Many cotton damasks have a luster, due to sizing and pressing, that is not permanent and will wash out.

Activity

Clip advertisements from newspapers illustrating (1), (2), (3), and (4) as given on page 65.

Collect several advertisements containing technical terms and look up their meanings.

Special Merchandising Devices

The modern consumer has every opportunity to satisfy his clothing needs. The variety of shops catering to his requirements insures ample choice of selection.

To Meet the Demands of the Economic Level of Customers.—There are many types of customers or consumers whose buying power is limited by financial conditions and varying standards of clothing appreciation and requirements. To meet these conditions, different types of shops have been organized, each catering to a special group of customers where the quality, workmanship, service, value, and prices have been planned to meet the requirements of each group. Some stores, such as large department stores, have attempted to meet the demands of all classes of customers of different economic levels by dividing the store into separate departments, each with merchandise, service, and prices adapted to the needs of different groups of customers.

Cost of Services.—The price of a garment in a small shop which operates on a cash-and-carry basis, with little or no service charges, is much lower than in a more exclusive shop where the cost of service charges is included in the final price of the merchandise.

It is possible, then, for each individual to choose those shops which will best meet his needs at a price he can afford to pay.

Bargain Basements or Departments.—In “bargain basements” one may secure merchandise that has not sold readily in the regular departments, being shopworn or unpopular in style, fabric, or color. It is then transferred to the bargain basement where it can be sold at a lower price. Here, also will be found “overstocks” of the manufacturer, which result either because of an error in estimating the demands of the consumers, or because the producer needed to keep his workers and manufacturing plants at maximum production. Sometimes seconds and lower grades of fabrics are included, and unless one is a good judge of fabrics, there is danger of getting inferior merchandise that is not a bargain at any price.

For those who have unlimited time and do not mind self-service, there are departments with racks of garments plainly marked in sizes appropriate for women and children of all ages. These garments are not of quality grade in fabric or workmanship, but they are generally good in line and style and are marked to be sold at a reduced price.

Budget Shops.—Budget shops have been organized in most department stores for customers who find it necessary to purchase through deferred payments and who, by paying a definite amount each month, can extend payment for merchandise over a certain specified time. This type of customer feels the need, because of business, family, or social requirements, to purchase garments of better quality than she could otherwise. While some stores have regular budget shops, others permit purchases on the budget plan from regular stock. There is an interest charge, and, therefore, a high price is charged for merchandise purchased under this plan.

Special Sales.—There is often an advantage in buying at seasonal sales, unless one buys goods that are really not needed at the time just because they have been reduced in price. One disadvantage in buying during the middle or late season is that the stock may be so limited that one cannot secure garments that are conservative in style. There is always a danger of limited sizes being left in stock, which is a decided disadvantage if one is difficult to fit. Extreme styles are usually left over at the end of the season and may be greatly reduced in price.

Special sales are held by shops to dispose of old stock before the new season starts. These are known as "end of season sales." They are usually worth while because it is possible to purchase garments of good quality at reduced prices. Coats, suits, dresses, and hats which at the beginning or height of the season, say September, October, November, or March, April, May, are at their highest price. The price of clothing or any other article tends to fall when the supply is increased, or when the demand for the article decreases. For example, at the beginning of a style season we pay more for clothing than at the end of the season, because the demand is greatest at the beginning and least at the end of the season. Hence, bargains, or clothing at reduced prices, are found at the middle or end of the season. Seasonal sales, however, are not for one who does not know values and who cannot, therefore, judge whether marked-down merchandise is actually a reduction on quality merchandise.

Those who demand style, quality, and high-class workmanship will be thrifty if they shop at the end of the season, provided they know how to buy conservative styles, such as those that remain in style from season to season.

Many people feel that extravagance in dress may be justified on the ground that it places money in circulation, thus giving many people employment. In order to benefit the community and therefore the individual to the highest degree, money should be spent for the things that give the greatest return, for the necessities, or for the important needs of life.

French, Specialty, or Exclusive Shops.—In these shops you will find a different type of service from that in the budget or lower-priced sections. The rooms are restful, quiet, and free from confusion. There are: easy chairs; conveniences for displaying costumes while one is at ease; many high-class saleswomen to show exclusive models; unhurried service; exclusive gowns which are not on display but are kept out of sight in separate rooms; manikins provided for showing gowns for your selection; expensive boxes and wrappings for delivery; charge accounts; and many other pleasing services.

In a French shop there may not be so many dresses from which to choose. Many models are imported or are copies of foreign importations, or are reproduced by exclusive American designers. Only one model of a design, color, or fabric will be found and generally it is not shown elsewhere. These shops, therefore, cater to a class of customers who require exclusive, high-class styles and pay high prices.

There are other kinds of specialty shops which sell only one type of merchandise, such as: children's, brother and sister shops; underwear and lingerie shops; shops selling accessories which can all be matched; shops for shoes and hosiery; shops for hosiery only, or for silk piece goods, or woolen piece goods, etc. Since these shops specialize in one kind of merchandise, a larger stock is possible.

Special Store Services

In order to cater to the needs of certain grades of customers, many stores install special service departments where one may obtain service free of charge. Of course, such service may be charged to advertising or overhead, but, regardless of this, the customer eventually pays for it. Among the different store services are:

1. Fashion shows or parades each season to show the style trends in wearing apparel. Another feature of interest is the manikin parading through the piece goods department to show the appearance of the fabrics when on the figure. Sewing

centers are provided in which the customers may cut, fit, and make garments from fabrics and patterns purchased in the store. Competent instructors, excellent equipment, and pleasant surroundings are provided for a nominal fee.

2. Personal shopping service. Many people who do not wish to shop can have their shopping done by a group of specially trained shoppers.

3. Depositors' accounts. Some stores encourage customers to deposit money with them. Interest is paid when ten dollars or more is kept on deposit, and a small interest is generally paid on the amount of a year's total sales. The chief advantage is that purchases are paid for and the balance on deposit is quickly available for an emergency.

4. Pamphlet department. Information in the form of leaflets is provided to customers regarding special sales, courtesy days, and bargain sales for the day. Deposit and charge account customers receive special bulletins with their statements. All departments cooperate in the preparation of these bulletins.

5. Package wrapping is a department set aside for assembling and wrapping parcels. There is also a department where bags, parcels, coats, etc., may be checked until one's shopping is ended.

6. Beauty parlors are installed in some stores where all kinds of services from manicuring to permanent waving are offered to customers at reasonable fees.

7. Lavatories, rest rooms, and the care of children are often included in store services.

8. Theater tickets may be bought at box office prices.

9. A travel bureau is provided to give information with regard to trains and traveling service.

10. Restaurants, tea rooms, and lunch counters are installed where food is provided at different price levels.

11. Demonstrations of many kinds, such as organ recitals, art exhibits, fashion shows, etc., are provided. Furniture departments exhibit apartments and rooms furnished and decorated in modern, French, or early American style.

QUESTIONS

1. Why is shopping so important in the life of every person?
2. Why is a woman considered the most important factor in shopping?
3. (a) What is meant by a retail dry goods store? (b) Where did the name originate?
4. Explain the important features of the department store.
5. Describe the relationship that should exist between the store and the customers.
6. Why should a splendid spirit of cooperation exist between the store managers and their customers?
7. Describe the characteristics and standards that should exist in good dry goods management.
8. (a) What enters into the cost of selling clothing in a retail store? (b) May one ever secure clothing below cost? If so, what is involved?
9. How may sales of wearing apparel be evaluated?
10. Why do most women shoppers visit two or three dry goods stores before purchasing?
11. (a) Describe in detail shopping ethics. (b) Explain the necessity of living up to these standards.
12. Describe the relationship that exists between dry goods stores and the community.
13. (a) State the economic value of clothing. (b) How is the price of wearing apparel determined?
14. Explain the value of a trade name in the purchase of clothing: (a) to the consumer, (b) to the retailer, (c) to the manufacturer.
15. Compare the two methods of purchasing: (a) on name, and (b) on merit.
16. Discuss the value of advertising in the purchase of wearing apparel.
17. Outline in detail special merchandising devices.
18. (a) List some special store services. (b) Estimate value of such service to a store. (c) Estimate value to the consumers.
19. Name the important points to remember in order to form good shopping habits.
20. Make a summary of what is meant by "ethics of shopping."

REFERENCES

- Baldwin, William H. *The Shopping Book*. The Macmillan Co.
Buttrick, Helen G. *Principles of Clothing Selection*. The Macmillan Co.

- Dooley, William H. Economics of Clothing. D. C. Heath & Co.
Donovan, Dulcie G. The Mode in Dress and Home. Allyn & Bacon.
Nystrom, Paul. Economics of Fashion. The Ronald Press Co.
Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress. J. B. Lippincott Co.

CHAPTER 4

TEXTILES, JUDGING CHARACTERISTICS, WEAVES AND FINISHES OF KNITTED, WOVEN RAYON AND SILK FABRICS

Importance.—The magnificent story of silk leads us back through centuries of Oriental history. For a long time this fabric was so valuable that it was used as money. Chinese records are filled with accounts of indemnities paid in silk fabrics, as we now pay ours with gold. It was literally worth a king's ransom. For centuries only kings and the highest nobility could wear silk garments. In fact, the amount of silk worn was an indication of rank.

Today, although silk is comparatively inexpensive, it is still as beautiful as in those ancient days when it was deemed fit for an Emperor's birthday present.

Analysis of Fibers.—Look at your fibers again and compare silk with wool and cotton. You will notice that silk is the strongest fiber for its weight. In fact, the filament of silk is as strong as soft iron of the same diameter. The fiber has much elasticity and an incomparable natural luster. Scientific tests show that it sheds dirt, is cool, and will outwear any other fiber. With all these virtues, we must acclaim it queen of the textile world!

Note the following comparisons:

1. Cotton and wool are cheaper than silk.
2. Cotton is more suitable for summer wear than wool because it conducts heat better than wool and silk—is cooler, therefore. Silk is suitable for mild temperatures.
3. Cotton wrinkles more easily than silk and wool.
4. While cotton collects dirt easily, it can be washed. Wool and silk must be dry cleaned.

5. Wool is warmer than cotton and silk.
6. Both silk and wool will hold their shape better than cotton, due to greater elasticity.
7. Wool and silk hold moisture better than cotton, hence they do not feel cold when damp.
8. Wool shrinks more than cotton or silk.

Silk Weaves.—Silk is woven in both standard and novelty weaves. The standard weaves include plain, twill, and sateen. The novelty weaves include brocades, brocatelles, ribbon weaves, and narrow fabrics.

Ribbons.—Novelty silk fabrics are shown also in silk ribbons. A ribbon fabric was originally a strip of fine fabric such as silk satin or velvet, having two selvages. Ribbons in this sense were introduced into Europe in the sixteenth century. Prior to this time they were not made separately, but were woven on the bands or borders of garments and were narrow like a rib; hence the origin of the word “ribband” which was the old English and the present French word for our term “ribbon.” During the early days of its manufacture it was frequently made of silk intermingled with threads of gold and silver. These ribbons were regarded as articles of luxury and, in order to suppress the tendency of the public in this direction, the English Parliament passed an act forbidding their use by tradesmen, artificers, and yeomen, reserving to the nobility the right to wear them.

History relates that in the years between 1650 and 1700 ribbons were worn in the greatest profusion by the men of Europe. Every portion of their attire was trimmed with them. It was then that ribbons acquired that hold upon public favor which lasted until the World War. The fashion of wearing them and their structure since then have had few fluctuations.

Knitted Fabrics

We are by this time familiar with the ordinary woven construction of cloth. Knitting, however, is a very different method of making cloth. It is a method which is rapidly gain-

ing technical perfection, and, by reason of this, creating its own demand in the world today. Therefore, it is important that we should understand this process thoroughly.

Knitting and Netting.—The terms *knitting*, *netting*, and *knotting* have all come from the same Anglo-Saxon root and indicate varying methods of manipulating a thread for the purpose of producing elastic and pliable fabrics. The art dates back to the early part of the sixteenth century and probably had its origin in Scotland.

The art and process of forming fabrics by looping a single thread, either by hand with slender wires or by means of a machine provided with hooked needles, is called knitting. Crocheting is an analogous art, but differs from knitting in that the separate loops are thrown off and finished by hand successively, whereas in knitting the whole series of loops which go to form one length or round are retained on one or more needles, while a new series is being formed on a separate needle. Netting is performed by knotting threads into meshes that cannot be unravelled, while knitting can be unravelled and the same thread applied to another use. Knitting is really carried on without making knots; thus, the destruction of one loop threatens the destruction of the whole web or piece of cloth, unless the meshes are reunited.

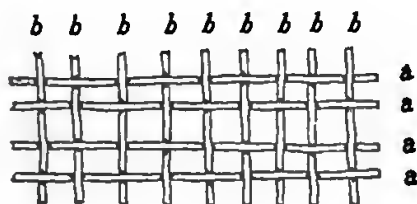
Knitting and Weaving.—Compare the elasticity of jersey and serge. As you know, jersey is a knitted fabric and serge is a woven fabric. Knitting is distinguished from weaving by the fact that knitted fabrics are made by a single system of thread, whereas woven fabrics are made by two systems of threads at right angles.

Examine the jersey and the serge under the pick glass and notice the construction. How does knitting differ from weaving? Notice that the single thread is formed into rows of loops which hang upon each other, thus giving the knitted fabric its characteristic elasticity. Why is such a fabric suitable for underwear?

A knitted fabric may be distinguished from a woven fabric

by studying the accompanying sketches (Figs. 16 and 17). The element of stretch, except what lengthwise elasticity may be inherent in the threads themselves, is wholly lacking in the woven fabric. Knitted goods, on the other hand, by reason of their "loop-on-loop" structure have great resiliency. Builders of looms have at times endeavored to secure this elastic effect by certain manipulations of the mechanism of the loom, but as yet nothing approaching the product of the knitter has been made.

Various Knitted Goods.—Knitted goods for outerwear have increased to such an extent that they are the standard for ready-to-wear clothing and even for the use of the dressmaker.



a, weft; *b*, warp

FIG. 16. Ordinary Weaving



FIG. 17. Knitted Structure

The common knitted fabric of fine texture, of different qualities, is used for dresses, and, also, in heavy weights, for overcoats and suits. Special names are not given to all knitted fabrics, but they are frequently named after the woven fabric they resemble in finish and weight.

ADVANTAGES.—The great advantage of knitted goods in certain types of wearing apparel is obvious. As a matter of fact, knitted fabrics have been used successfully in every type of garment from step-ins to topcoats. For step-ins and other undergarments knitted silks have no equal. They wash and wear well and fit perfectly. Hosiery, of course, is the one article of fabric in which a knitted construction is imperative because the elasticity of the fabric must conform to the shape of the leg in order to avoid wrinkles.

Classes of Knitted Fabrics.—There are three general classes of knitted fabrics made on machines, as follows:

1. *Circular Knitting*, which is done in tubular form. The threads run continuously in one direction around the fabric.
2. *Flat Knitting*, which is done in a flat form. The threads run alternately back and forth across the fabric.
3. *Warp Knitting*, which is done in a flat form. The threads run lengthwise of the fabric.

There are many varieties of each class, but only those most generally used will be considered here. They are:

Circular Knitting:

1. Plain
2. Non-resist
3. Tuck
4. Ribbed

Flat Knitting:

1. Plain
2. Fancy

Warp Knitting:

1. Single warp tricot (one-bar)
2. Double warp tricot (two-bar)
3. Milanese
4. Raschel machine rib effect

Glove Silk.—This is a special type of knitted fabric. Glove silk is knit the same as a sweater or stocking, instead of being woven as are most fabrics. Each stitch is interlocked with the next to prevent runs. There are two types of glove silk:

1. *Milanese*. Distinguished by the diagonal lines running through it. Milanese shrinks in both width and

length, so it is usually advisable to buy a size larger than the customer ordinarily wears.

2. *Tricot*. Distinguished by the vertical lines on the right side and the horizontal lines on the back. Tricot shrinks somewhat in length and stretches in width.

ADVANTAGES OF GLOVE SILK.—

1. Usually pure dye.
2. Does not run.
3. Is tightly knit and has a smooth satiny finish.
4. Retains body heat and has the double advantage of being warm yet light in weight.
5. Fits better than a woven silk.

The subject of hosiery has been considered in detail on page 108 of *Attractive Clothes*.

Growth of the Knitting Industry.—The knitting industry in 1912 had 345 enlarged knitting machines. Today there are over 160,000 large machines. This rapid growth is due to the following facts: (1) a knitted fabric can be made in one-seventh the time required to produce a woven fabric of equal merit; (2) quickness of production lessens the cost of manufacture; (3) knitted fabrics for outer wear have style and wearing qualities to meet the demand of the public.

The first knitted outer cloth appeared in America from England as jersey cloth in 1878. It met with immediate approval and was in vogue for three years; then it disappeared. Since 1912 it has been made in America and has become popular.

Knitted fabrics in Jacquard design were produced in 1922 with the result that, today, designs of any description (floral, ornamental, etc.) are being manufactured. This late accomplishment is significant, because it consummates the last rung in the ladder of bringing the knitted fabric industry up to the attainments of the much older textile industries. This opens up an entirely new field for knitted fabrics and promises to lead the way to their future predominance.

Production and Manufacture of Silk—Silk Fabrics

Characteristic Treatment of Silk.—Having reviewed silk in comparison to its sister fibers and taken up two of its important novelty constructions, we shall now go back to the study of the production and manufacture of silk itself.

The silk industry comprises four general branches: (1) the production of cocoons, (2) the reeling of the silk from the cocoons into skeins of raw silk, (3) the manufacture of spun silk (or schappe) from waste silk, (4) the manufacture of raw silk and spun silk into goods.

Although silk is produced by cheap labor, it is the most costly of fibers because of the great amount of time and care involved in raising the worm and obtaining the silk from the cocoon. Silk comes from the cocoons of several species of caterpillars called silkworms. The one that produces the bulk of the world's silk, as well as the best, is the *Bombyx mori* which has been raised indoors for centuries and is called the cultivated silkworm. There are certain silkworms that grow wild and are called Tussah silkworms. The worms are hatched by subjecting the silkworms' eggs, each one almost the size of the head of a pin, to artificial heat.

In Japan about 60% of the crop is usually produced in the spring, about 10% in the summer, and about 30% in the autumn. The worm develops a very strong appetite which is satiated only by a large amount of freshly picked mulberry leaves. It grows so rapidly that in the course of a little more than a month it sheds its skin and acquires a new one.

After reaching full development, the worm climbs and begins to spin its cocoon or silk envelope about its body. In doing so it gives off a jellylike substance which it twists about its body. As soon as the silk fluid is exposed to the air, it hardens. This jellylike substance contains a filament of silk with a gum. The worm completes its cocoon in about three days, then changes into a chrysalis which, if not killed within a fortnight, develops into a moth that breaks its way out of one end of the cocoon. The female moth dies shortly after

laying her eggs. The cycle from birth to death, including all transformation, is less than 60 days. (Fig. 18.) As there is a lapse of about 10 months between the laying time and the next hatching, some silk firms have extensive cold storage rooms for keeping the eggs.

Since pierced cocoons from which moths have emerged cannot be reeled, only about 2% of the chrysalides are allowed to develop into moths and emerge to lay eggs for the next crop. The remainder are killed in the cocoon, usually by stifling them in hot, dry air. About 10% of the cocoon crop consists of doupions or double cocoons, where adjacent worms have spun their cocoons side by side and have so interwoven them that the two filaments must be reeled together. Such



FIG. 18. Moth, Silkworm, and Cocoons

silk is so coarse and uneven that it is usually kept for local manufacture, though some is exported for use in making goods of rough appearance.

It is estimated that one hundred female moths produce about 1 ounce of eggs, numbering 35,000 to 40,000 (each moth laying 300 to 400 eggs). These yield a similar number of cocoons, which will weigh undried about 160 to 190 pounds. The weight of the individual cocoons may vary from 16 to 50 grains each, undried. It takes about 11 pounds of undried cocoons (equal to about 4 pounds of dried cocoons) to produce 1 pound of raw silk. Cocoons which have been pierced by the escaping moths have only a limited value as a substance for making spun silk.

Numbering Raw Silk.—Raw silk is measured in numbers called “deniers.” A denier represents a definite weight, 0.05 gram. A definite length of silk, 450 meters, is weighed in denier units. The number of units represents the size. *To illustrate:* If 450 meters of raw silk are found to weigh 0.8 gram, then the size is $\frac{0.8}{0.05} = 16$ deniers. The silk may vary in fineness 2 deniers, hence the size is written 15/17.

Thrown Silk.—Thrown silk may be defined as yarn made from raw silk, that is, from silk reeled from the cocoon. Raw silk consists of several parallel cocoon filaments held together only by the natural gum. It cannot be boiled off, dyed, and weighted and remain in workable condition. Therefore, if silk is to be skein dyed, it must first be thrown into yarn.

Silk “throwing” (from the Saxon “thrawan”—to twist) is the technical term used for the processes involved in making yarn from raw silk. As raw silk is already in the form of a continuous strand, there is no occasion for the preparatory machinery that is needed for all other textiles, where a mass of short, tangled fibers of varied lengths needs to be transformed into a continuous length of roving. In silk throwing, the main object is the insertion of twist into the raw silk, with such doubling as may be desired.

Thrown silks are known as organzine, tram, or single, according to the method of manufacture.

ORGANZINE.—Organzine, mainly used as warp, is made by doubling two or more threads which have first been well twisted 16 times in the single, and then giving them a firm twisting in the opposite direction 14 turns to the inch. Crepe yarn is organzine with 40 to 80 turns to the inch.

TRAM.—Tram, mainly used as filling, is made by combining two or more raw silk threads, and then twisting them together with a slack twist in 2 to 4 turns to the inch. Strength is not so essential in the filling as it is in the warp, and the slack-twisted filling permits a more brilliant finish.

SINGLES.—Singles are single raw silk threads, twisted or not. Such yarns, when very hard twisted, are used for the warp and filling of chiffon and kindred fabrics. Some singles are woven in the gum, without twist, and produce cloths which, after being boiled out and bleached, have a softness and brilliancy unattainable in cloths made of twisted yarns. The famous *habutae* of Japan is a striking illustration of such work. At least a fourth of American raw silk imports, however, *are woven* in the grey, without any throwing.

Manufacture of Silk Yarns.—More than two-thirds of the thrown silk used in the American industry is thrown on contract by commission throwsters, either for weaving mills or for silk merchants. Most of the throwing mills are located in Pennsylvania, gravitating toward the coal mining region, where fuel is inexpensive and where female labor is available at low cost, since the mines employ only males.

Making Silk Cloth.—Silk cloth is made in practically the same way as other woven fabrics.

The thrown silk is wound on bobbins or spools. From these bobbins the organzine is run off into warps, and the tram is wound on a special kind of shuttle bobbin, called quill. The weaves are exactly the same as the weaves in other fabrics—plain, twill, satin, Jacquard, pile, etc. Silk fabric may be made from either raw silk, tram, organzine, or crepe yarns.

In this country they are made of organzine in the warp, tram in the filling, or crepe yarn in either warp or filling.

IRIDESCENT.—In silk weaving this is a color effect produced by the use of warps and wefts of different tints and hues. Properly, iridescent effects exhibit alternating or intermingled colors like those of the rainbow, as in mother-of-pearl. In its more general application, the term describes any glittering of colors which change according to the light in which they are viewed, without reference to what colors they are, so long as they present a changeable metallic sheen.

DYEING.—After the silk has been thrown, it is usually reeled into skeins, and sent to the dye-house to be colored.

The principal operations in the skein dyeing are the boiling-off, weighting, and coloring processes. As part of the raw silk thread is composed of a soluble gum, which detracts from its handle and luster, it is desirable to boil this off before proceeding with the dyeing and finishing processes.

FINISHING.—All silk goods, whether yarn-dyed, or piece-dyed, or printed, are given some kind of finish; sometimes it is no more than is necessary to smooth out the wrinkles. There are many finishing processes by which goods may be treated. The goods are run through gas flames to singe off loose fibers, over steam cylinders to dry and straighten them; and over a great variety of sizing machines to stiffen them with starch, gelatin, or glue. There are calenders, or heavy rollers, to smooth and iron them, steam presses of great power to press them out, breaking and rubbing machines to soften them, and tentering machines to stretch them to uniform width. There are also moiréing (or watering), embossing, and various other machines for special purposes.

WATERPROOFING.—One of the greatest difficulties with which the manufacturer of piece-dyed and printed silk goods has to contend is the ease with which they become spotted with water. For a number of years many people have tried to prevent this by various processes. There are no less than 200 such processes patented. Many of them have not met with much success, as they injure the feel or strength of the goods.

WEIGHTING OF SILKS.—Since silk is purchased in raw condition by the pound and nearly 25% by weight is gum—and much of this gum is lost in boiling—there is a tendency to replace this loss by weighting.

Weighting or Loading.—Since genuine silk materials which are heavy enough to drape well are expensive, manufacturers have found it necessary to weight thin silk materials with tin and lead compounds to give them the desired body, drape, and feel. Some of these fabrics contain twice as much tin or lead as silk, or even more. Blacks and dark blues are especially likely to be heavily weighted. Weighted silks tend

to shrink more than unweighted silks. They are much less resistant to wear and tear. They deteriorate much more rapidly through perspiration, salt air, and sunlight, and they tend to become limp and unattractive in appearance in the laundering and dry-cleaning procedure. Excessively weighted silks have the further disadvantage, to be considered in hot weather, that they permit considerably less flow of air through the fabric.

With the public's discovery of the disadvantages of metallic weighting, the silk trade attempted to deal with criticism by modifying the adulteration without reducing its amount, through the substitution of "soluble" weighting compounds for a portion of the insoluble lead and tin compounds. But this soluble weighting makes the fabric extremely sensitive to water spotting, so that a dye may have its tint or luster permanently altered by a single drop of water.

The term "pure silks" is used for fabrics which contain no metallic weighting and not more than 10% of any substance other than silk—except black which may contain up to 15%. (Ruling of the Federal Trade Commission.)

Weighted silks are silks which have been treated with metallic salts to give them more body or weight. There are good grades of weighted silk. If they are moderately weighted and the processing has been properly done, they will give good service. A good weighted silk should, under ordinary circumstances, give at least two years' wear.

Spun Silk.—Waste silks include: (1) the pierced cocoons, that is, those from which the moth has come out by making a hole and breaking the fibers in one end of the cocoon; (2) the waste made in the filatures in producing raw or reeled silk, chiefly the outside fibers of the cocoon and the inside next the chrysalis; and (3) also the waste made in manufacture. The waste silk is ungummed, that is, the gum is removed from the fibers by boiling with soap, by macerating or retting, or by chemical reagents. Since the fibers are small, they must pass through the same operations as cotton and wool in order to make a continuous thread. The reeled silk from the whole

cocoon is continuous, and it is not necessary to card, comb, and spin it. Imported spun silk is called schappe silk and is used for the pile of some velvets.

Textile Printing.—The subject of dyeing and printing was considered on pages 155, 156, 201, 202, 456-458 of *Attractive Clothes*.

Manufacture of Velvets.—One of the oldest and most popular of silk fabrics is a pile fabric consisting of upright threads projecting from the cloth. This material is called velvet. It has a short, thick pile face, and a plain back. It may be all silk, silk face, or all cotton. Fine velvet is made wholly of silk. Much spun silk is used in velvets. If the pile is deeper than one-eighth of an inch, the fabric is called plush.

Synthetic and Silk Fabrics Compared—Tests

Rayon.—The subject of rayon has been considered in great detail on pages 152, 177-181, 451 of *Attractive Clothes*.

Characteristics of the Synthetic Fabrics.—The synthetic fabrics except acetate have similar advantages and disadvantages. All are smooth and lustrous fabrics; all take dye readily, and all are resistant to soil. All the fabrics obtained by these methods dry clean easily and may be laundered satisfactorily when handled correctly.

The synthetic fabrics obtained by the cellulose acetate method are said to rival silk in beauty. Special dyes are used for these fabrics and the resulting colors are beautiful and fast. Cellulose acetate yarns have the lowest power of absorption of any textile fiber. This is an advantage in laundering, as these fabrics do not absorb stains or perspiration and dry quickly. Care must be exercised in pressing and ironing these fabrics, for too hot an iron may cause them to melt. All synthetic fabrics have this advantage over silk—white fabrics never become yellow with age.

Synthetic fibers have the disadvantage of losing strength

when wet. At the present time, this disadvantage is not nearly as great as when synthetic fibers were first placed on the market.

Because synthetic fabrics are man-made and because constant research is being carried on to improve them, we can expect that the present advantages of these fabrics will, in time, be increased and the disadvantages greatly lessened.

Comparison of Silk with Rayon.—Notice a piece of rayon or artificial silk and compare the characteristics and uses for clothing with those of silk.

1. Rayon has a metallic or dull luster while silk has a deep pearly luster.
2. Rayon is made of wood pulp, while silk is fiber secreted by the silkworm.
3. Rayon is not very strong compared to genuine silk.
4. Dampness and washing tend to weaken rayon.
5. The price of rayon per pound is less than half as much as that of raw silk.
6. There are different grades of rayon.

Examine different kinds of rayon and synthetic fabrics and paste them in your notebook with a description under each.

There are, on the market, various trade names of rayon, such as Celanese and Bemberg which are featured and highly advertised.

Tests for Silks and the Synthetic Fibers.—There are various procedures by which the customer may test the fabric for adulteration and also for wearing quality.

THE BURNING TEST.—Some information can be found out about the kinds of fabrics from which our clothes are made by testing the yarns out of which they are woven. Is the fabric what it claims to be? Are you getting cotton when you are paying for wool, or rayon when you are paying for silk? It may be that the cheaper product is just as desirable for a particular use, but it should be sold at a price corresponding to its value.

From the material to be tested, unravel yarns crosswise and lengthwise. Untwist these yarns to ascertain if two or more kinds of fiber have been used to make them. If two or more kinds of fiber are found, keep the different kinds apart, and experiment with each kind separately. Such burning tests as the following cannot be used satisfactorily if blended yarns (those with two or more kinds of fiber in a one-ply yarn) are used.

It would be well always to have a "control" in performing such tests as these. The control method has been described on page 157 of *Attractive Clothes*.

Apply a lighted match to an end of the yarn to be tested. Notice the way in which the material under test burns. Blow out whatever flame there is and smell the smouldering yarn. Material that flames readily and gives a smell like burned paper will be rayon or one of the vegetable fibers (cotton, linen, hemp, jute, etc.). Cellulose acetate burns a little more readily and the yarns burn black, like sealing wax. The ends of the extinguished cellulose acetate yarns will have hard black globules, and the fumes will have a faint vinegar-like smell.

Silk and wool yarns will burn with difficulty and in burning will smell like burned feathers. If the silk is weighted with tin or lead, the metal weighting will not burn but will remain as black ash. The ash of a heavily weighted silk textile, if burned in the oven, will have the form of the original.

Silk may also be adulterated by the addition of cotton. This is not necessarily a disadvantage, but if a material is part cotton, we should not pay the price of silk for it. Such a material can be tested by ravelling threads out both lengthwise and crosswise and burning them. Cotton burns quickly with a yellow flame, and leaves a gray, powdery ash rather than a gummy ball as in the case of silk.

Silk materials may be tested for the presence of rayon by ravelling out some threads and burning them. The burning of silk has been described above. Most rayon threads burn quickly with a flash, leaving almost no residue. One variety of rayon, which is found in celanese, seems to melt and drop like sealing wax.

MICROSCOPIC TESTS.—Longitudinal and cross-sectional views of rayon under the microscope are the only means by which rayon can be positively identified as to process of manufacture, as described on pages 248, 249.

LIGHT TESTING.—If you hold a fabric to the light, the closeness of weave, weighting, and other defects, such as knots and thin places, can be seen. If one set of yarns is weak but covered with nap, the light test will show the defect. *Illustrations:* loosely woven pussy willow taffeta and poor grades of outing flannel.

Factors Influencing Use of Silk.—There are various factors that should influence us in the selection of silk materials: (a) the purpose of the garment, (b) the amount of wear, (c) appearance, and (d) wearing qualities.

Since silk is expensive it should not be worn except where it will appear to advantage and will not be subject to rough treatment or strains. Then again, since we must pay more for silk than any other fabric, we should receive maximum wear.

Silk has excellent wearing qualities and always looks well—holds its shape, sheds the dirt, and has an attractive luster.

Lace

History.—Lace is an ancient sister art to weaving. Its romantic history dates from the early Egyptians and continues with a few gaps down to the present day. We know little of this gracious art until the reign of Henry VII in England, when lace was reserved for royal attire. No man beneath the rank of baron and no woman who was anything less than a knight's wife might wear lace. At this time, and later, the princes of the Church used laces lavishly on their robes and on the altar cloths. Elizabeth of England introduced the ruff during the second year of her reign. This was a stiff starched collar trimmed with as much as 20 yards of the fine lace of the period. (Fig. 19.)

Following the ruff came the large shawl lace collars of the

style of Charles the First. Persons of quality wore these lovely collars until the middle of the seventeenth century, when the second Charles instituted the wearing of flowing lace cravats.

While the ruff was on the wane in England, Catherine de Medici was startling France with the standing ruff, which

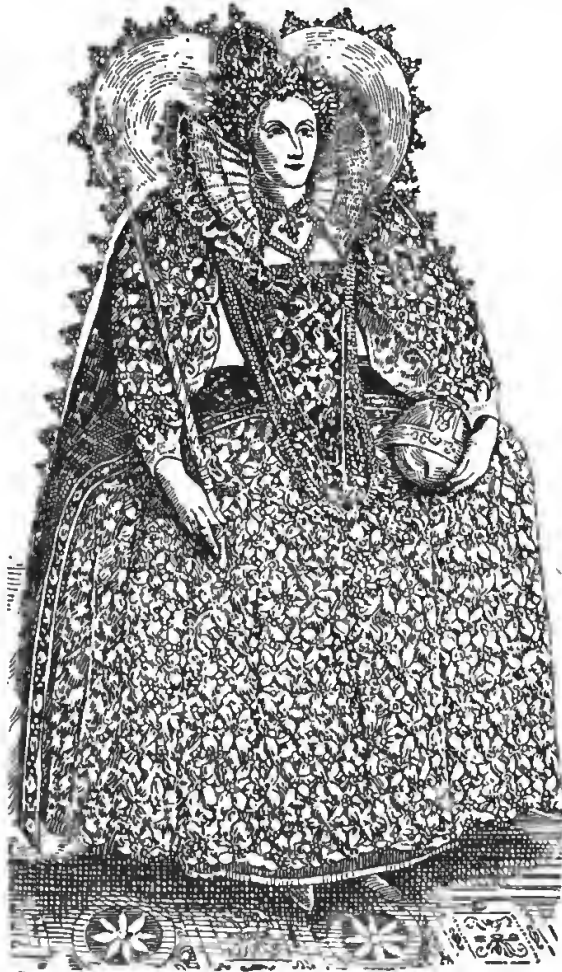


FIG. 19. Queen Elizabeth's Ruff of Starched Lace

stood up behind the head like a fan and swept around into a low graceful décolletage. The delicate needle-point lace was held up by supports of wire wound around with gold or silver threads. This fashion, incidentally, was one of the most dramatic and alluring in the history of feminine fashions.

Throughout the seventeenth century, extravagance in dress grew apace in Europe. The lavish use of lace was part of this trend. Indeed, lace became so popular that it was not unusual to see bathtubs decorated with great flounces of it.

Lace, however, did not thrive so well in the American colonies at this time. Laws prohibiting its purchase were actually enacted to prevent the frivolous-minded from indulging their tastes for lace-trimmed finery. Prohibition of lace continued from year to year until the early part of the eighteenth century, when fine clothes were again permitted and the Steinkirk, a neckcloth of lace worn negligently, became a fashion.

Point d'Alençon, that delicate lace which is responsible for much of the beauty of fashionable dresses, was also highly thought of by Empress Eugénie. She even went so far as to have her white satin wedding dress entirely covered with it. Marie Antoinette wore laces on her sleeves and a frill outlining her décolletage. European nineteenth century styles saw laces used for many dressy occasions. Pre-war elegance included lace blouses, lace evening dresses, and a few lace street dresses. Lace is used today more sparingly than ever in its history. Lace evening dresses are the only garments made entirely of lace, except perhaps a few bridal dresses. Except for these, the use of lace today is largely confined to underwear.

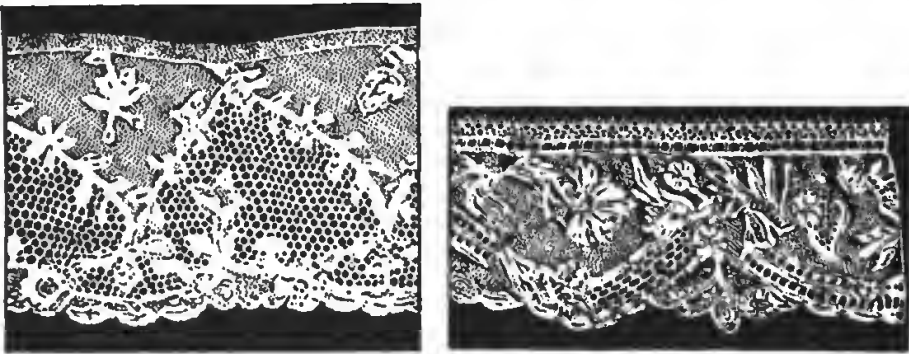
Lace lends itself to flounces and ruffles and misty drapings. It is not an expensive fabric for the lines of the present time. When a feeling for the ultra-feminine creeps into fashion again, lace will come back into style. Blouses with lace trimmings and even blouses made entirely of lace have recently come into fashion. When this feeling for the ultra-feminine expands even further, lace will again come back into style.

Kinds of Lace.—The word lace is sometimes used to denote any fabric of a lace-like character. Technically, however, no fabric produced by braiding, knitting, weaving, or embroidery can be called lace. Lace consists of two parts—the ground and the design. It may be made by hand or by

machinery. The ground on which the design is spaced is called the *mesh*.

There are two kinds of lace: (1) needle lace, made with a single needle and thread, with each opening, called a mesh, being completed as the work progresses, and (2) pillow or bobbin lace, made with many threads, each attached to a bobbin and resting on a pillow while being made—hence the name, bobbin lace. Because of its manufacture by many bobbins it is possible to make more elaborate designs and more beautiful meshes than in any other fabric.

Examine a piece of pillow lace and needle-point lace and notice from the above illustrations and the samples that bobbin or pillow lace has the qualities of suppleness (softness) and graceful flexibility more so than needle-point, and is better



a. 18th century

b. 17th century

FIG. 20. Pillow-Made Brussels

adapted for use in mantillas, veils, and coverings for the head and shoulders of women. (Fig. 20.)

Needle-point lace has greater strength and makes a better appearance, due to the beautiful designs. Because of these reasons and because they are more difficult to make, needle-point laces are often called the artistocrats of the lace world, and are used only on occasions of state.

BOBBINS OR PILLOW LACE.—The following laces are all bobbin or pillow types.

Val lace or *valenciennes* lace is one of the most popular. It is made either by hand or machine in a variety of widths

and designs. The *French val* lace is made of very fine thread with a diamond-shaped mesh. The double thread, or *German val*, is made of a heavier thread (double size) with a hexagonal mesh. The *filet val* lace has a square mesh. Val lace, on account of beauty, adaptability, and durability, is used on all kinds of lingerie, neckwear, blouses, and gowns, as well as on children's clothing. (Fig. 21.)

Mechlin lace appears like val lace, but is made of finer thread and is lighter and filmier in appearance.

Torchon laces are made of coarser yarns than val laces, hence they are firmer and more coarsely plaited. These laces are very strong and are made in all widths and designs.

Cluny lace is made of a rather coarse linen thread with a characteristic star design. It is quite strong and is used for

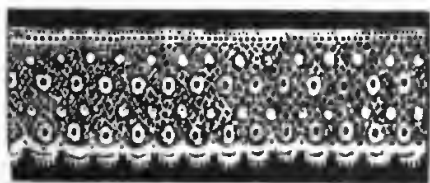


FIG. 21. French Valenciennes

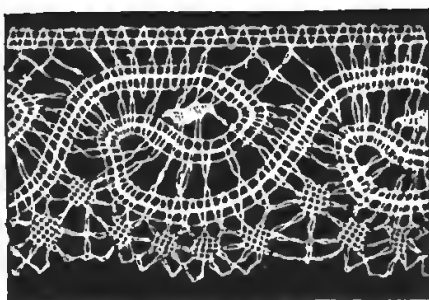


FIG. 22. Hand-Made Cluny

decorative purposes rather than for trimmings on clothing. (Fig. 22.)

Maltese lace is composed of silk with a maltese cross and seed-like design.

NEEDLE-POINT LACE.—The principal needle-point laces are as follows:

Venetian point or *venise* laces are made either of coarse, strong, or fine threads. The coarse thread types contain heavy cords or ridges.

Filet lace has a square mesh with the design woven or interlaced into it. It is a strong lace with a flat surface.

OTHER LACES.—There are other laces such as *Armenian* and *Irish* that are of minor importance. The *Armenian* lace is narrow and is made with a needle. It is used for hand-

kerchiefs and infants' wear. *Irish* lace is a strong, thick lace made with crochet hooks with distinct Irish motifs, such as shamrocks, roses, etc.

QUESTIONS

1. Make a comparison of the qualities of cotton, wool, and silk.
2. Name some of the standard types of silk fabrics and also some novelty silk fabrics.
3. (a) Describe briefly the history of ribbon fabrics. (b) State how they are made. (c) Estimate their artistic value in clothing.
4. (a) What is a knitted fabric? (b) How does it differ from netting, crocheting, and weaving?
5. (a) Draw a sketch showing the structure of a knitted and of a woven fabric. (b) Show how the prominent qualities are due to the structure.
6. Outline briefly the history of the knitted fabrics.
7. What are the advantages of knit underwear?
8. (a) Describe the manufacture of warp knitted fabrics and weft knitted fabrics. (b) Explain their value. (c) List their artistic points.
9. Describe the growth of the knitting industry.
10. (a) Describe glove silk. (b) Tell how it is made. (c) Give advantages of costumes made of it.
11. Give a brief history of silk showing that for centuries its use was restricted to the nobility.
12. (a) Describe the characteristics of silk. (b) Tell how the silk is obtained. (c) Explain how silk is treated in the manufacture of silk fabrics.
13. (a) Explain the difference between reeled and spun silk. (b) Give the respective values.
14. How is the fineness of silk yarn and of rayon yarn expressed?
15. To what is the fineness of silk due?
16. Why is cotton carded and reeled silk not carded?
17. Describe the manufacture of: (a) organzine, (b) tram, (c) crepe, (d) spun-silk yarns.
18. (a) How are silk fabrics finished? (b) Describe the process of weighting silk. (c) State the advantages and disadvantages of each. (d) What is meant by pure-dyed fabrics?
19. Describe the process of waterproofing silk.
20. Explain the cause for the differences in price of silk fabrics.
21. (a) Explain how spun silk is manufactured. (b) Give the advantages and disadvantages of fabrics made of it.
22. Outline a brief history of rayon and of synthetic fabrics.

23. Describe the various processes in the manufacture of rayon.
24. (a) What is meant by synthetic fabrics? (b) How do they play an important part in the rayon industry?
25. (a) Describe the manufacture of spun rayon. (b) What are the advantages and disadvantages of this fiber?
26. Why is it necessary to bear in mind the type of rayon that is to be cleaned?
27. Give the tests for the different types of rayons.
28. What are the artistic qualities of rayon?
29. What are the tests for silk such as tearing, burning, feeling, and holding to the light?
30. (a) What are the factors influencing the choice of silk materials? (b) Name some of the silk fabrics giving their uses, appearance, and wearing qualities.
31. State the artistic value of lace for clothing.
32. Give a brief history of the development of lace.
33. What is the difference between bobbin and point lace?
34. Can machine lace be told from real lace?
35. State the principal uses of lace.

REFERENCES

- American Bemberg Corporation. Suggestions for a Class Project. (Booklet.)
- Bray, Helen A. Textile Fibers, Yarns and Fabrics. D. Appleton-Century Co.
- Celanese Corporation of America. Facts About Celanese. (Booklet.)
- Denny, Grace. Fabrics and How to Know Them. J. B. Lippincott Co.
- Dooley, William H. Textiles. D. C. Heath & Co.
- Dyer, Elizabeth. Textile Fabrics. Houghton Mifflin Co.
- Goldenberg, Samuel L. Lace, Its Origin and History. Brentano's.
- Hess, Katherine P. Textile Fibres and Their Use. J. B. Lippincott Co.
- McGowan, Ellen A., and Waite, Charlotte A. Textiles and Clothing. The Macmillan Co.
- Moore, Mrs. N. H. The Lace Book. Frederick A. Stokes Co.
- Palliser, Mrs. Bury. Chats on Old World Lace. Charles Scribner's Sons.
- Palliser, Mrs. Bury. A History of Lace. Charles Scribner's Sons.
- Roberts, Edna H. How to Know Laces. Textile Publishing Co.
- Sage, Elizabeth. Textiles and Clothing. Charles Scribner's Sons.
- Sharp, Mary. Point and Pillow Lace. E. P. Dutton & Co.
- Small, Cassie. How to Know Textiles. Ginn & Co.
- Viscose Company. The Story of Rayon. (Booklet.)

CHAPTER 5

ADAPTATION OF A COMMERCIAL PATTERN

The use of a commercial pattern for wearing apparel has been on the constant increase. This is largely due to an enthusiastic interest in making clothes and an entirely new spirit in sewing.

The commercial pattern with its clear directions and detailed diagrams has been greatly responsible for this change of attitude toward sewing. Tremendous displays of the newest styles and most attractive fabrics, plus the constant scientific improvements in materials, have done much toward creating an inspiration in home dressmaking and professional designing.

Each pattern contains a vast amount of information to guide the making of the frock from start to finish. It contains a chart showing how the pattern may be adjusted so that little or no fitting is necessary after the garment is cut out and joined together. There are also finishing details to give the garment a professional touch.

Sewing is not only a practical art but the girl who is learning it is discovering a new and happy use for her hands and leisure. She will also find a great deal of satisfaction in being able to express herself by an individual and proper selection of fabrics and color.

Much of the success of the appearance and fit of the garment depends entirely on the proper selection of the style and material, and the correct use of the pattern.

Since commercial patterns are made in standard sizes, they must be carefully checked and compared with the body measurements of the individual, and, if necessary, the pattern pieces should be altered for correct size before cutting the material.

How Commercial Patterns Are Made

The process of making commercial patterns is in accordance with the standard set in the ready-to-wear trade of the better and higher-priced garments.

The subject of pattern making may be divided into several important branches, some of which are as follows: drafting, draping, grading, the technical manipulation of the block pattern, and fitting.

STEPS IN PATTERN MAKING

Drafting is the art of making patterns through the flat designing method. Patterns are developed on drafting paper from the sketch of an original design or from the measurements of any size figure.

Draping is recognized as one of the oldest methods of designing. A pattern is made by draping the material right on the figure. The combined method of draping and drafting is often used in making patterns.

Grading is the art of increasing or decreasing a sample size pattern proportionately to larger or smaller sizes, in accordance with the standard body measurements.

Technical Manipulation of the Block Pattern. A block pattern or, as it is sometimes called, a foundation pattern, consisting of a waist, skirt, and sleeve, is used as a guide to develop any style pattern. By proper manipulation of the block pattern, all seams, darts, tucks, plaits, and flares are planned and developed in creating the style.

Fitting involves the taking of special measurements and making any necessary adjustments on the regular size pattern. The garment is then properly fitted and adjusted on the individual figure.

The steps used in making each new design for commercial patterns are given on following pages.

How Commercial Patterns Are Made

FASHION ARTIST

The fashion artist draws a rough sketch of an original design which is to be used by the designer for making up the design in muslin or appropriate material. (Fig. 23.)



Courtesy of McCall Corporation

FIG. 23

How Commercial Patterns Are Made

DESIGNER

The designer drapes the garment on the figure, using the block pattern as a guide for the proper fit and the necessary ease allowance on the garment.



Courtesy of McCall Corporation

FIG. 24

How Commercial Patterns Are Made

ILLUSTRATOR

The illustrator makes an envelope drawing of the completed garment, showing several views of the same design in appropriate color and material suggestions. (The art department is constantly furnished with large swatches of the newest fabrics which are used very appropriately as a guide to illustrate the suggested materials.)

DIAGRAM ARTIST

The diagram artist then sketches each step in the making of the garment after it is ripped, the seam edges notched, and the directions for constructing and finishing are properly described in detail. These sketches and instructions become part of the cutting and sewing instruction guide.

MODEL MAKER

The model maker proceeds to make an exact copy of the ripped muslin pieces in a manila paper pattern, making corresponding notches and marking names and directions on each pattern piece.

GRADING CHART

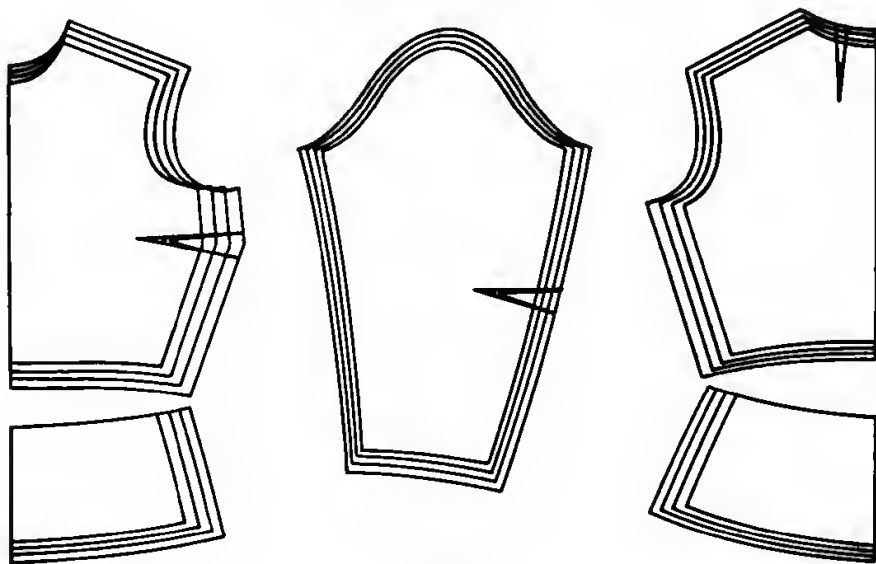


FIG. 25

How Commercial Patterns Are Made

GRADER

The grader then grades the pattern to larger and smaller sizes in accordance with the standard variation of the body measurements. (See Fig. 25.) All edges in every size are carefully matched and properly notched.

LAYOUT EXPERT

The layout expert receives the set of patterns and proceeds to lay out each size in various widths of material for required yardage. The layouts are sketched for reproduction in the cutting instruction sheet. These diagrams show how pattern pieces may be laid on the material to the best advantage and in accordance with each view as illustrated on the pattern envelope.

EXAMINERS

Examiners check each step of the work as it goes through the various departments to insure absolute accuracy.

These patterns are then manufactured in tissue paper, making millions of patterns annually.

The tissue patterns are cut in stacks about 1,000 high, then folded into envelopes and shipped to all parts of the world.

Catalogs, fashion books, magazines, and other publications which keep the sewing public posted on the up-to-date style trend, are shipped together with the patterns to the dealers.

Those engaged in the commercial pattern industry must have had the fundamental training in costume design, sketching, textiles, sewing, drafting, draping, fitting, and economics of clothing and style, plus some experience in the garment manufacturing trade.

Classification of Sizes

The classification of sizes and the standard body measurements were issued by the Bureau of Standards, Washington, D. C., and they were accepted and are being used by the commercial pattern companies.

It is significant that sizes 12 and 14 appear in the three groups of sizes: misses, junior miss, and girls. Therefore, a clear definition is required for each group, which is given as follows:

Misses' sizes are 12-14-16-18-20. Styles in misses' sizes are suitable for women who are tall or medium in height, and slender, measuring, bust 30", 32", 34", 36" and 38". The sample is usually made in size 16 to fit the model measuring, bust circumference 34", waist 28", hip 37", and height 5 ft. 7" or 8".

Junior miss sizes are 13-15-17, or sometimes 12-14-16. The styles in the junior miss sizes are designed mainly for the youthful figure and the sample is made in size 13 or 12 for the model measuring, bust 31" and height about 5 ft. 5" or 6".

Girls' sizes are 6-8-10-12-14. These styles are suitable for the girls of elementary and junior high-school age. Size 8 or 10 is the sample size.

For girls' sizes, the standard increase in height per size is 4", or 2" per year.

For example:

Size 10—	height is	54"
" 12—	" "	58"
" 14—	" "	62"

The standard increase in height for the junior sizes is 1½" per size.

Ladies' sizes are made according to the bust measure.

The sizes are 36-38-40-42-44, etc. Patterns for ladies' sizes are made to fit the mature figure and at the same time are suitable in design.

How to Take Measurements

The person being measured should wear a plain dress in thin material. The garment should have a high neckline and regular armholes with plain set-in sleeves.

Have the person stand in her natural posture when taking the following measurements:

A. BUST.—Measure around fullest part of bust, passing the tape rather closely, about 1" below armhole, and a little higher in back.

B. WAIST. — Take measurement around the natural waistline, drawing the tape closely.

C. HIP.—Pass the tape, not too tight, around the hip, 7" below waist-line.

D. ACROSS BACK.—With the arms moved forward slightly, measure across back between armholes, 4" below neck.

E. ARM.—Pass the tape tightly around the fullest part of arm, about 1" below armhole.

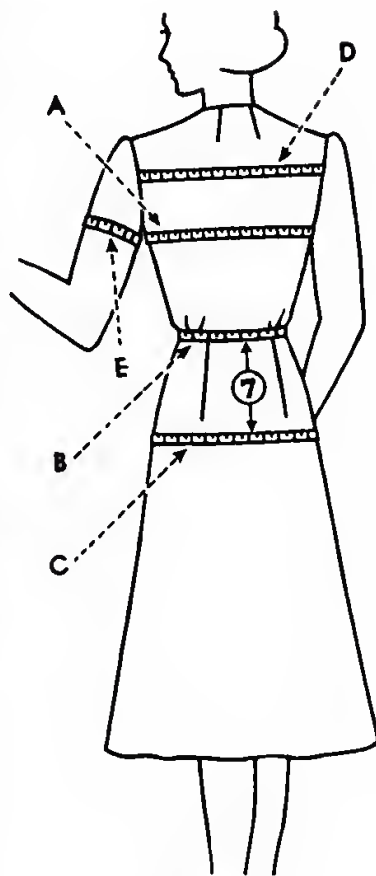


FIG. 26

CORRESPONDING BODY MEASUREMENTS

MISSSES						JUNIORS					
Size.....	12	14	16	18	20	Size.....	11	13	15	17	
Bust.....	30	32	34	36	38	Bust.....	29	31	33	35	
Waist.....	26	27	28	30	32	Waist.....	25½	26½	27½	29	
Hip.....	33	35	37	39	41	Hip.....	32	34	36	38	
Across back..	13	13½	14	14½	15	Across back.....	12½	13	13½	14	
Arm.....	10	10½	11	11½	12	Arm.....	10	10½	11	11½	

LADIES						GIRLS					
Size & Bust..	36	38	40	42	44	Size.....	6	8	10	12	14
Waist.....	30	32	34	36	38	Breast.....	24	26	28	30	32
Hip.....	39	41	43	45	47½	Waist.....	24	25	26	26½	27
Across back..	14½	15	15½	16	16½	Hip.....	25	27	29	31	33
Arm.....	12	12½	13	13½	14	Height.....	46	50	54	58	62

Ease Allowance for Proper Fit

EASE ALLOWANCE FOR PROPER FIT

When making patterns for garments to fit the human figure, the garment, if made in woven materials, must have sufficient allowance for ease and comfort around bust, hip, arm, and across back.

For the plain dress with a long sleeve, the minimum allowance for ease is as follows:

- A. 4" ease around bustline.
- B. $1\frac{1}{4}$ " ease around hipline for the junior and misses' sizes; $1\frac{1}{2}$ " ease for the ladies' sizes.
- C. 2" ease around the bicep.
- D. $\frac{1}{2}$ " ease across back.

If there is not sufficient ease allowance across back between armholes, it will cause an uncomfortable fit at that part of the garment and eventually the sleeves will rip out of the armholes, caused by forward arm movement.

The usual depth of the dress armhole is $\frac{3}{4}$ " to 1" lower than the armpit of the human figure (see detail E).

This applies to garments with or without sleeves and is necessary because the perspiration at the armpits causes discoloring and weakens the fibers of most materials.

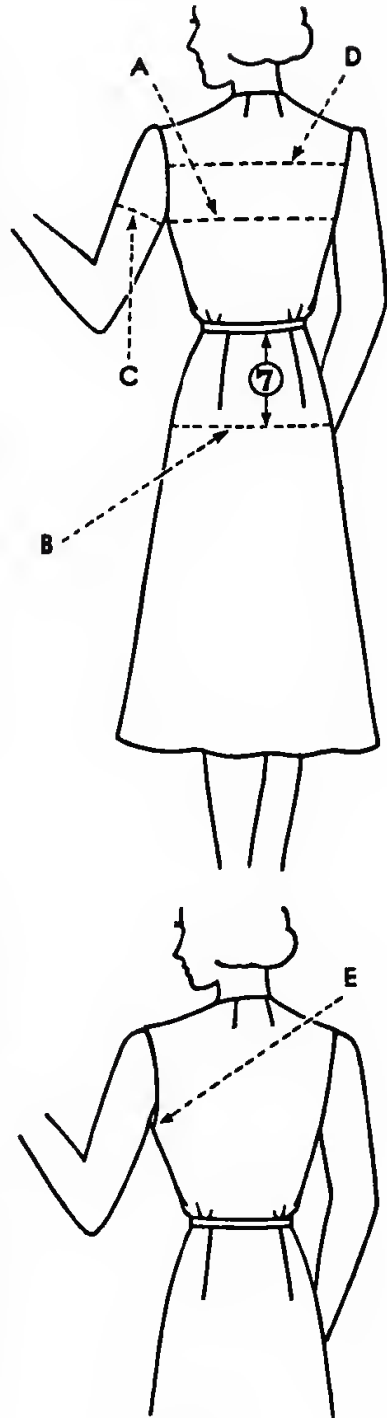


FIG. 27

Ease Allowance for Proper Fit

A sleeveless dress, such as a sports dress, evening gown, fitted bodice, vest or slip, should be made about 2" larger around bust than the body measurement, to allow for chest expansion (see detail *F*).

For example: For size 16 standard living model, measuring 34" around bust, the minimum measurement for a sleeveless dress should be 36" around bust; 38" for a dress with sleeves.

If a sleeveless dress has less than 2" ease allowance, it will cause the garment to fit too snugly around the diaphragm, and the side seams to rip when taking a deep breath.

All dress forms have the 2" chest expansion allowance so that when a fitted bodice is made to fit the figure, the garment will be provided with the necessary chest expansion allowance.

A separate skirt must be made to fit the waistline quite snug (see detail *G*). A skirt which is attached to a waist may have about 1½" ease allowance around waistline.

The ease allowance around hip (detail *H*) is the same as described for the dress, detail *B*.

If the skirt has less than the minimum ease allowance around hip, it will cause the side seams to rip, due to hip expansion when the wearer sits down.

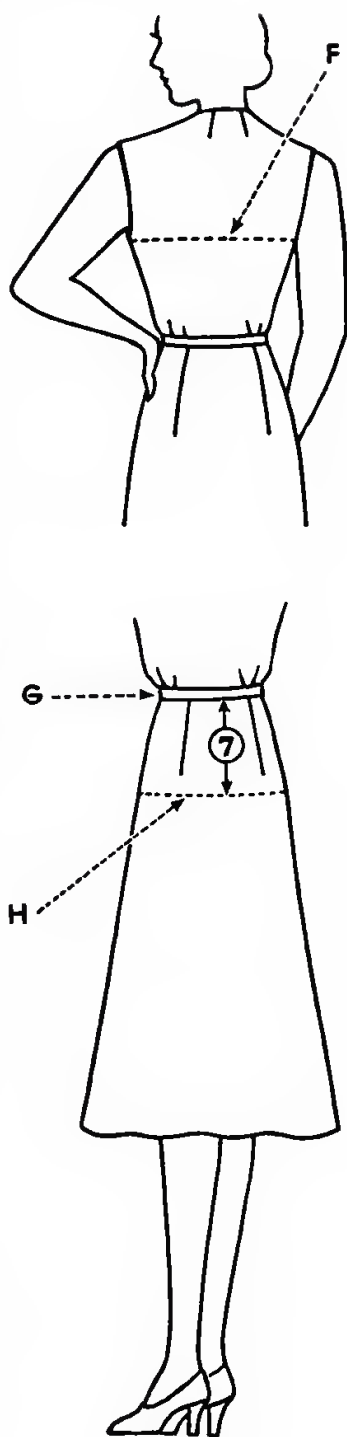


FIG. 28

Selecting Suitable Styles

There is an art in selecting suitable styles for all types of figures. The variety of figures may be classified as follows: the well-proportioned or standard, the average, and the extremely out-of-proportioned.

The average figure constitutes the greatest percentage. Under this classification, the figure generally is considered well-proportioned, but there are certain noticeable characteristics in the figure which can be minimized through proper style line application.

Some of the characteristics of the average figure are:

1. Slightly shorter or taller in comparison with the standard figure.
2. Larger or smaller hip in proportion to the bust measure.
3. Shoulder slope variation.
4. Slightly narrower or broader shoulders.
5. Prominent shoulder blades.
6. Prominent bust.
7. Head or neck, smaller or larger, in proportion to the body.

When styles are designed in accordance with the existing fashion trend, the designer aims to make the garment becoming, attractive, individual, and in good taste for the occasion. This is usually accomplished by harmonizing style lines and proper application of decorative trimming on suitable materials.

By style lines we mean seams, tucks, darts, plaits, and silhouette of the garment. Seam lines are not only used as style lines or to join sections of a garment together, but often serve to emphasize the size of certain parts of the figure. *For example:* Horizontal seam lines on the garment tend to broaden and shorten the figure; vertical lines help to slenderize and heighten the form.

The illustrations on this page show how vertical lines may be made to appear longer and shorter, or horizontal straight lines made to appear curved through optical illusion.

The illustrations on the following pages show how some of the fundamental style lines may be applied to best advantage on various types of figures.

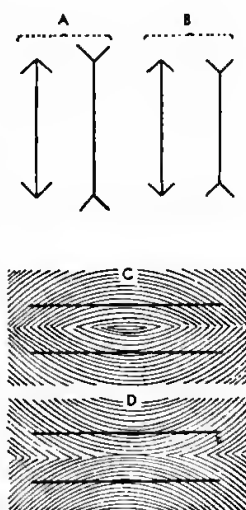


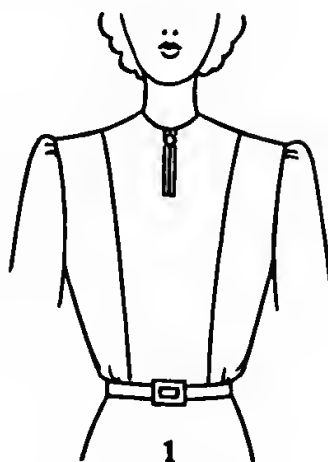
FIG. 29

Selecting Suitable Styles (Waists)

1

Illustration shows three-piece front. The back is also three-piece, similar in design to the front.

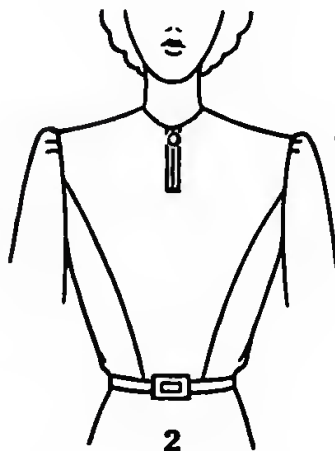
This style is most suitable for the following figures: broad or normal shoulders; stout or medium size figure; short figure.



2

This style is also a three-piece front and three-piece back design, but front and back seams emphasize the broad shoulders and small waistline.

It is most suitable for a person with narrow or normal shoulders and larger waistline.



3

This style gives the front an eton or bolero effect. It emphasizes a larger waistline and narrower shoulders.

It is suitable for the short person with extremely broad shoulders and small waistline.

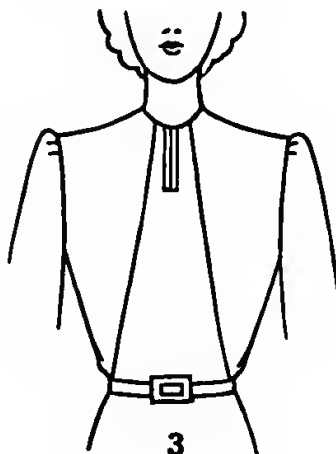


FIG. 30

Selecting Suitable Styles (Necklines)

4

Illustration shows garment with a broad neckline design, which emphasizes a short and stout neck, making it appear squatty.

Most suitable for the longer neck.



4

5

The V-neck design tends to lengthen and slenderize the neckline. The square neck design gives practically the same effect.

The V-neck is suitable for the short, stout, or normal neck. The square neck slenderizes but does not lengthen as much as the V-neck.



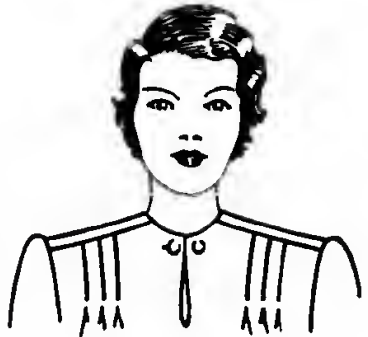
5

6

Sketch shows regular or high neck design.

Usually worn to cover the hollow part of the neck in front, or the prominent nape in back of the neck.

It tends to shorten the extremely long neck.



6

FIG. 31

Selecting Suitable Styles (Collars)

7

Illustration shows a small, flat-fitting collar which emphasizes a large head and broad shoulders.

This size collar is most suitable for the figure with a small head and slender neck.



7

8

Sketch shows a large collar, sometimes called bertha collar.

This minimizes the width of the shoulders and the size of the head.

It is suitable for average size head and neck.

Must be avoided for the figure with a noticeably small head.



8

9

This is a mannish collar design which minimizes the length of the neck.

This style collar is suitable for the smaller head and tends to broaden the shoulders. It should be avoided for the extremely short neck because the collar usually has a high stand.



9

FIG. 32

Selecting Suitable Styles (Shoulder Lines)

10

Style shows a regular armhole with a plain set-in sleeve, and is tailored in appearance.

It is conservative in design and suitable for all types of figures and shoulder silhouettes.



11

Illustration shows sleeves with fullness at top of cap. It gives the appearance of broader shoulders and is most suitable for the figure with narrow or sloped shoulders.

For a stout person with broad shoulders, the sleeve cap fullness should be reduced to a minimum amount.



12

This is a raglan sleeve design which tends to give the appearance of sloped shoulders.

This style is appropriate for the figure with broad or square shoulders.

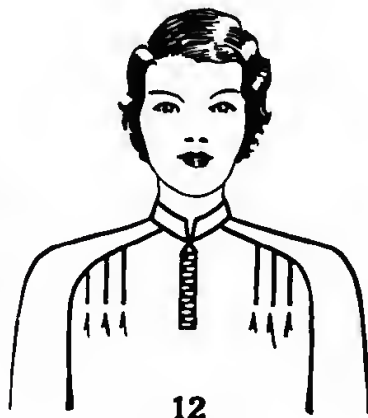


FIG. 33

Selecting Suitable Styles (Body Lines)

13

Sketch shows vertical style lines which tend to lengthen and slenderize the short, stout figure.

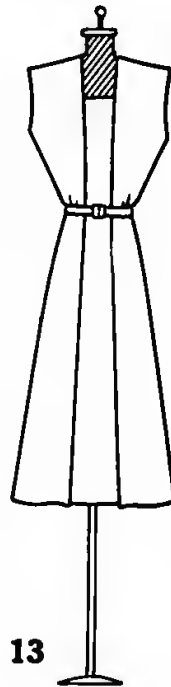
This style must be avoided for the extremely tall and slender figure.

14

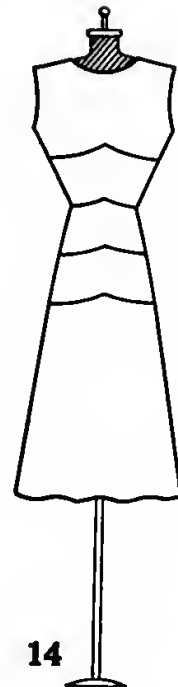
Horizontal style lines emphasize a broad figure.

This style also tends to make the figure appear shorter.

It is not suitable for a short, stout person, particularly with large hips.



13



14

15

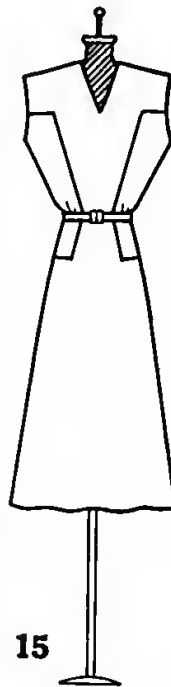
This style shows lines inclined toward the waistline which tend to broaden the shoulders and hips, and slenderize the waistline.

It is appropriate for a figure with narrow shoulders, small hips, and large waistline.

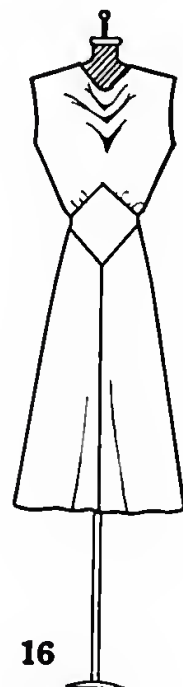
16

Illustration shows diamond-shaped section in front of the waistline.

This emphasizes a large waist and minimizes the size of the hip. It must be avoided for a figure with a prominent stomach.



15



16

FIG. 34

How to Obtain the Correct Size Pattern

1

Pattern must be ordered by bust measure in misses', juniors', ladies', and girls' sizes, for dresses, blouses, coats, jackets, or undergarments, such as nightgowns, slips, camisoles, etc.

A larger size should not be ordered for a coat pattern or a smaller size for an undergarment, as the pattern has the necessary ease allowance around bust.

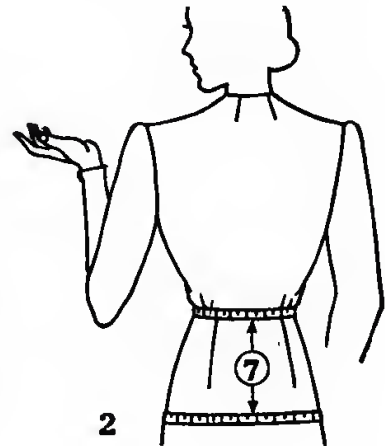


2

Skirts, shorts, trousers, slacks, and bloomers are sized according to the waist measure.

For skirts, shorts, trousers, or slacks which are usually fitted closely around hip, pattern is ordered by hip measure, as it is easier to adjust pattern at the waistline.

For bloomers, pattern is ordered by the waist measure as the garment is usually loose-fitting around hip.



3

When sleeve patterns are sold separately, they are sized according to the arm measure.

When a set of sleeves is made for dresses, the patterns have the necessary ease allowance around the bicep for each particular size.

For example: Arm measure (bicep) is 12"; pattern is marked size 12 and has the sufficient ease allowance.



FIG. 35

How to Select Appropriate Materials

It is just as important to select suitable materials for various types of figures as it is to decide on the correct style.

The materials may have a printed or woven design but the design in the fabric, whether large or small, vertical or horizontal, prominent or inconspicuous, will have a definite effect in appearance on the wearer.

When styles are designed in the garment trade, the color or the design in the fabric is very often taken into consideration. In other words, the new style is especially created around the particular design in the material, just as plays are written around an individual stage or screen star.

Fundamentally, the vertical, horizontal, or diagonal stripes in the fabric will have the same effect in appearance on the wearer as the style lines in a garment, as shown in following illustrations.

These illustrations demonstrate the importance of careful selection of the most becoming material for the individual.

One must always ask the following questions: Are vertical stripes appropriate for tall or short persons? Will diagonal stripes, if cut a certain way, square or slope the shoulders? What effect will large plaids or designs have on the short person? What advantage is there in cutting the yoke in horizontal-striped material for a person with narrow shoulders?

There are many ways of minimizing certain characteristics in the woman's figure through proper application of suitable material.

1

This illustration shows garment cut on the bias, with the stripes forming a V-shape at center front and back.

Suitable for a person with sloped shoulders and noticeably narrow hips. Diagonal stripes, running upward, help to square the shoulders and make the hips appear larger.

2

The sketch shows garment cut on the bias but with the stripes forming an A-shape at center front and back.

This has an opposite effect to the V-shape, and is suitable for a person with square shoulders and prominent hips.

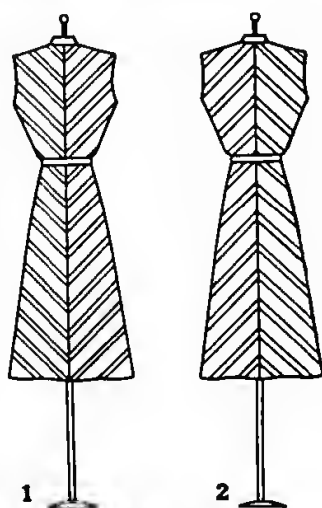


FIG. 36

How to Select Appropriate Materials

3

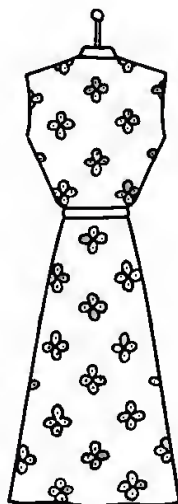
Material with a large flower design should be avoided for the short, stout person as it tends to exaggerate the size of the figure.

Most suitable for the slender figure of tall or medium height.

4

Sketch shows a conservative all-over design appropriate for a short, stout person.

It is also practical for all types of figures because the design will not exaggerate or minimize any out of proportion measurements in the figure.



3

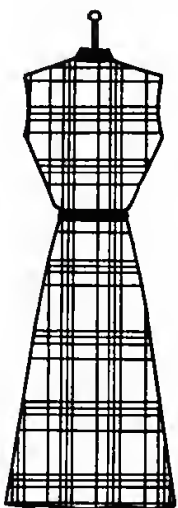


4

5

The large plaid design has practically the same effect on the figure as the large flower design.

Large plaids are most suitable for sports wear and for the youthful figure.



5

6

The small plaid or check design is most suitable for tailored garments and is appropriate for any type of figure.



6

FIG. 37

How to Select Appropriate Materials

7

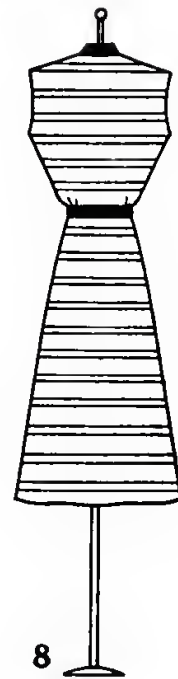
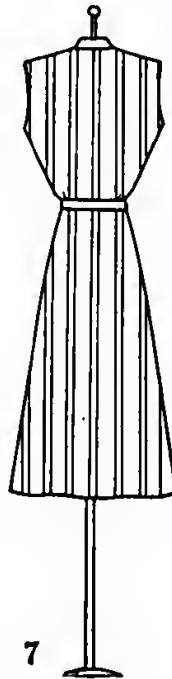
Illustration shows garment cut in lengthwise stripe material.

Most suitable for the short, stout person because it lengthens and slenderizes the figure.

8

This garment is illustrated in crosswise striped material.

It is most suitable for the tall and slender person and should be avoided for the short, stout person, particularly with prominent hips.



9

Sketch shows garment in striped material, cut lengthwise and crosswise.

Suitable for a short person with narrow shoulders and small hips.

The crosswise stripes in the yoke sections make the shoulders and hips appear wider.

10

Suitable for a tall and slender person with extremely broad shoulders and prominent hips.

The lengthwise stripes in the yoke sections tend to minimize the width of the shoulders and hips.

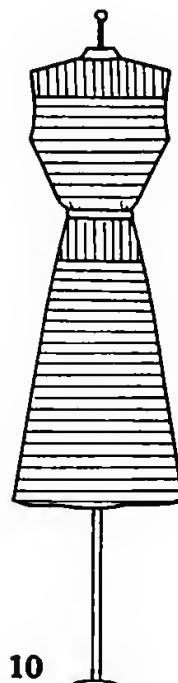
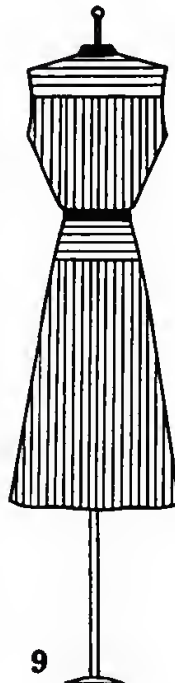


FIG. 38

Altering a Commercial Pattern

Whenever an alteration is necessary, it should be done in the pattern before cutting out the garment. This will help to eliminate most, if not all, of the fitting adjustments.

Alterations should be made within the pattern pieces and not along outer edges, to retain the original style outline of the pattern.

Compare the length measurement given on the pattern envelope with the desired length measurement for the individual, and if necessary, adjust pattern as follows:

1. FOR THE SHORTER FIGURE

Shorten pattern above the waistline and below the hip by making corresponding tucks with pins.

The usual proportionate alteration for a 3" reduction or increase is 1" in the waist; 2" in the skirt.

2. FOR THE TALLER FIGURE

Lengthen waist and skirt by slashing across pattern sections above the waistline and below the hip, and spread necessary amount.

Pin slashed sections over thin paper.

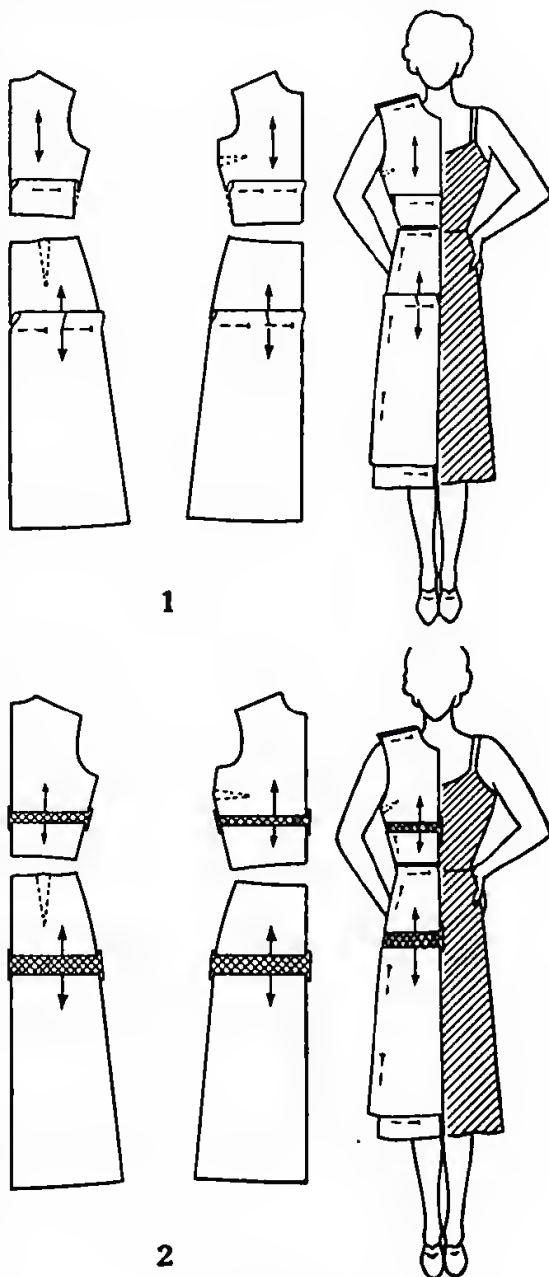


FIG. 39

Altering a Commercial Pattern

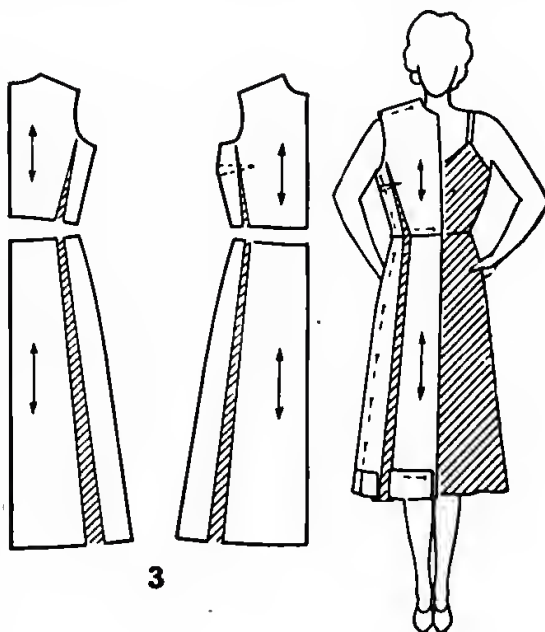
If the hip measurement is larger or smaller in proportion to the bust measurement, the pattern should be adjusted as follows:

3. FOR LARGER HIP

First, compare the individual's hip measurement with the standard measurement and, if there is any difference, make the necessary alteration.

For example: If the individual has a 2" larger hipline in comparison with the corresponding standard bust measurement, the pattern (of which only half is usually given) requires 1" increase at the hipline or $\frac{1}{2}$ " increase in front and $\frac{1}{2}$ " in back.

To alter, slash pattern from lower edge to armhole near underarm seams, and spread the required amount at hipline to nothing at armhole. Pin slashed sections over thin paper.

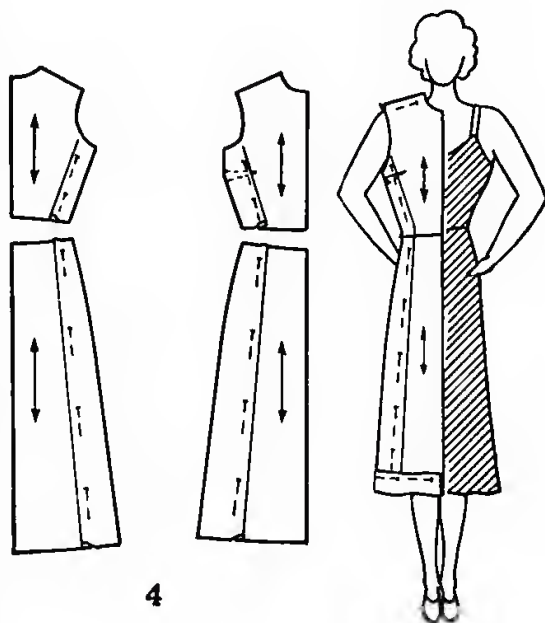


3

4. FOR SMALLER HIPS

Use the same method of altering pattern as described above for larger hips, but make tucks in pattern in place of slashing and spreading.

The correct amount of ease around the hip must be retained when altering the pattern.



4

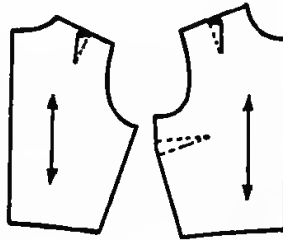
FIG. 40

Altering a Commercial Pattern

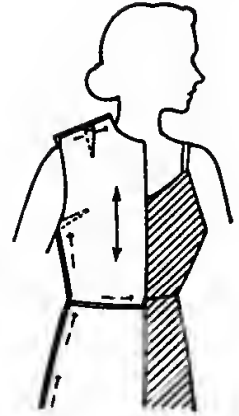
5. FOR NARROWER SHOULDERS

To reduce width across front and back at shoulder, make tiny darts in pattern at about the middle of the shoulder.

For example: If shoulders are $\frac{1}{2}$ " narrower than pattern, make $\frac{1}{4}$ " dart in front and back about 3" long.



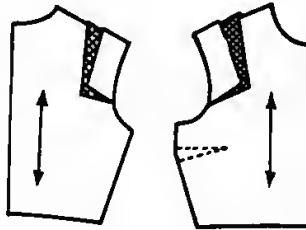
5



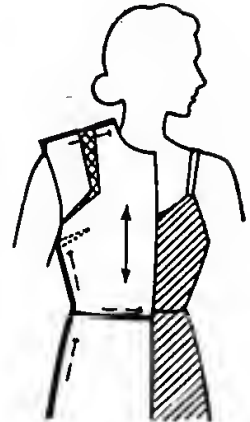
6. FOR BROADER SHOULDERS

Slash pattern from center of shoulder down and across to armhole. Spread the required amount at shoulder.

Pin spread over thin paper; then straighten shoulder edges.



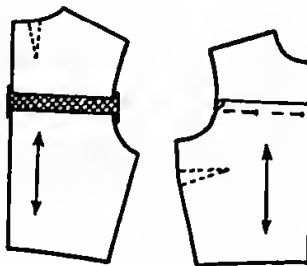
6



7. FOR ROUNDED BACK AND FLAT CHEST

Slash across back at center of armhole and spread necessary amount (usually about $\frac{1}{2}$ " or $\frac{3}{4}$ "); then make about a $\frac{1}{4}$ " tuck across chest in front.

This alteration prevents the garment from drawing up in the front and falling toward the back.



7

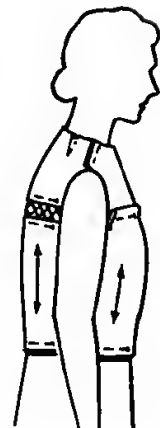


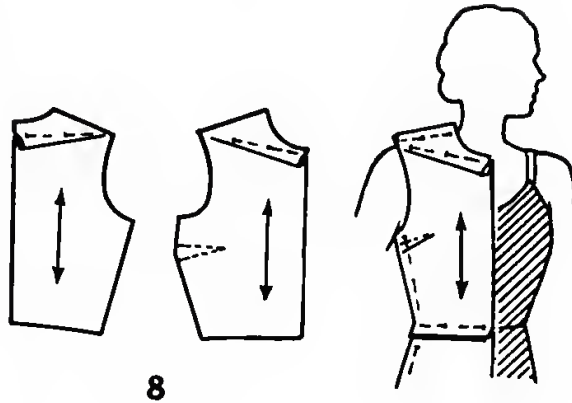
FIG. 41

Altering a Commercial Pattern

8. SQUARE SHOULDERS

Alter pattern by making a dart across front and back from neck to upper corner of armhole (the amount to be taken out is usually $\frac{1}{2}$ " in front and back at neck).

This alteration will prevent the garment from wrinkling below the neck.

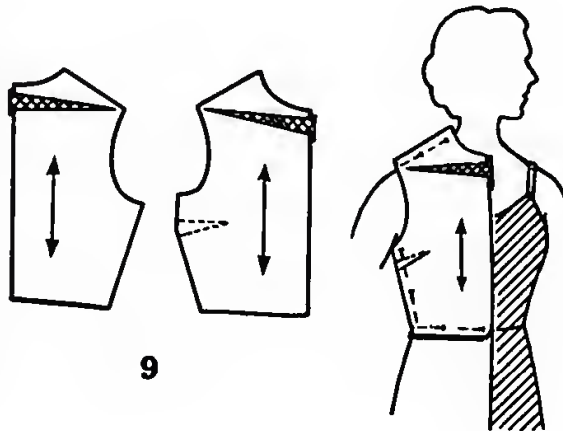


8

9. SLOPED SHOULDERS

Use the same method of altering the pattern as described above for square shoulders, but instead of darts, slash and spread the necessary amount (about $\frac{1}{2}$ ").

This prevents diagonal wrinkles in the garment from neck toward the lower part of the armhole.

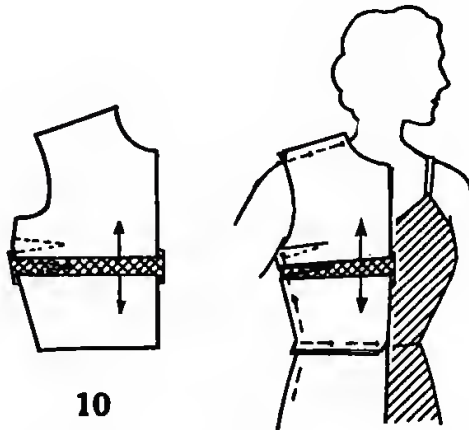


9

10. FOR PROMINENT BUST

This type figure requires a longer length in front only. Alter as follows: Slash across front at bustline, and spread about $\frac{1}{2}$ " or $\frac{3}{4}$ ".

The extra amount at the underarm caused by the spread must be taken up in a side dart. This applies to a pattern whether it has a side dart or not.



10

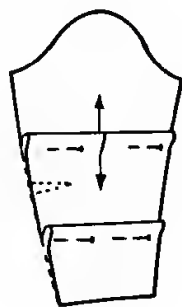
FIG. 42

Altering a Commercial Pattern

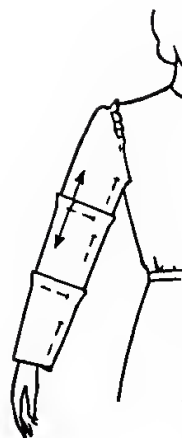
11. TO SHORTEN SLEEVE

For a shaped sleeve which has a dart or plaits at the elbow, make tucks across pattern above and below the elbow.

For a straight sleeve, as a gathered or bell sleeve, which has no dart at elbow, make only one tuck across center of pattern.

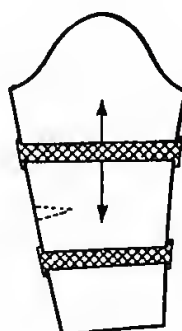


11

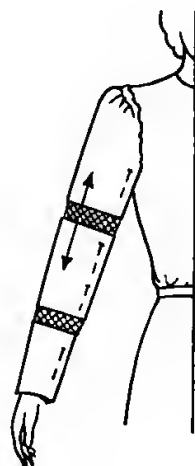


12. FOR LONGER ARM

Slash pattern above and below the elbow, and spread necessary amount; then pin over thin paper to hold spread in position.



12

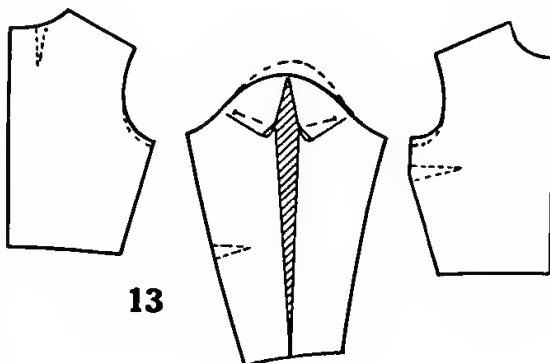


13. FOR LARGER ARM

If pattern has less than the 2" ease allowance around the bicep, make the following adjustment in the pattern:

Slash through center of pattern from cap to bottom, and spread the necessary amount, forming darts across cap to flatten the pattern. Pin over a thin piece of paper.

Add to top of cap the same amount as the width of the darts. Cut armholes of waist a little deeper to fit cap increase.



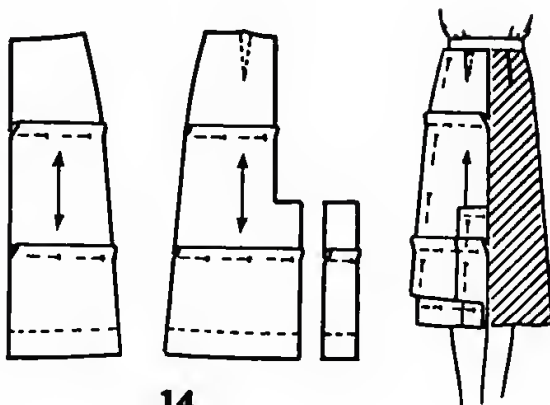
13

FIG. 43

Altering a Commercial Pattern

14. FOR SHORTER SKIRT

If skirt has a plait as illustrated (or godets the same length as the plait), make tucks across pattern in two places (a little below the hip and above the knee). Otherwise, make only one tuck across pattern below the hip.



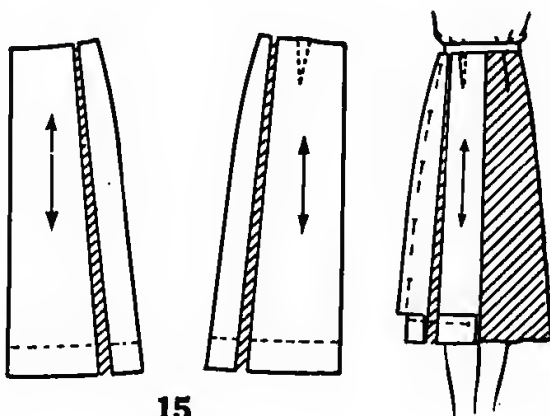
14

15. FOR LARGER HIP

Slash pattern from bottom to waistline, near side seam, and spread the required amount at hipline. Pin over thin paper to hold spread in position.

If necessary, the extra amount at the waistline may be taken in by making the dart a little deeper.

If skirt is without darts, reduce at side seam from waistline to nothing at hip.



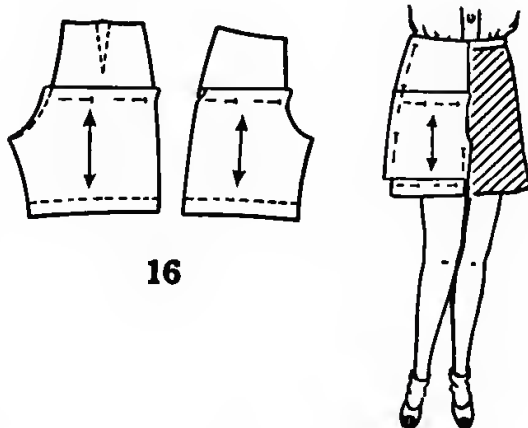
15

16. ADJUSTING LENGTH OF SHORTS

Pin pattern together and try on, to determine the correct depth of crotch, which should be about $1\frac{1}{2}$ " deeper than the figure.

To shorten, make tucks across pattern above the crotch.

To lengthen, slash and spread in the same places.



16

FIG. 44

Altering a Commercial Pattern

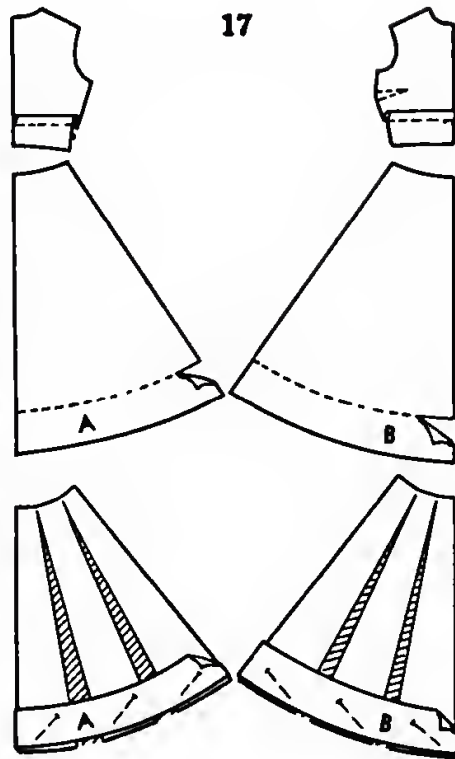
17. ADJUSTING A CIRCULAR SKIRT

First shorten waist by making tucks across front and back of pattern above the waistline.

Make remaining reduction at lower edge of skirt pattern by cutting away evenly, as shown by dotted lines, sections *A* and *B*.

In order to retain the original width at lower edge, slash pattern in several places, from lower edge up.

Spread pattern to fit sections *A* and *B*; then pin to hold spread in position.



18. MARKING THE HEMLINE OF CIRCULAR SKIRT

After the garment is finished, but before making the skirt hem, hang garment on a hanger or dress form for a day or two, to allow the bias part of skirt to sag or stretch.

Some materials sag more than others at the bias part of the skirt; therefore, for best results, use the above method.

To mark hemline, measure evenly from floor and pin or mark with chalk.



FIG. 45

Laying Pattern on the Material

Press all pattern pieces to remove the creases. Place pattern on material with the grain line on the pattern parallel to the selvedge on the material. Pin pattern to material placing pins about 1" inside of cutting edge and at close intervals.

When cutting opposite sections of a garment, as a right and left sleeve, etc., on open single material, first cut one sleeve, then turn pattern over and cut the other sleeve.

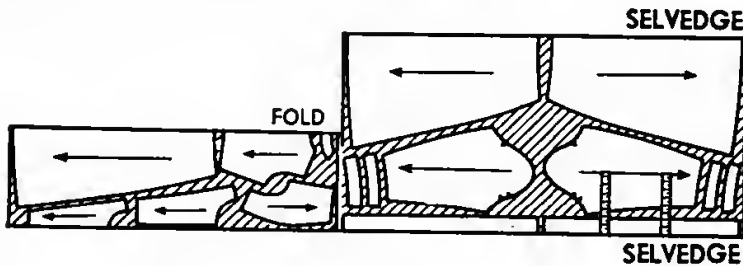


FIG. 47

FOR NAP OR ONE-WAY DESIGN MATERIAL

For materials with a raised nap on the right side of the goods, such as velveteen, corduroy, and velour cloth, lay pattern in one direction on material with the nap running upward. For materials with a flat nap, such as pan or chiffon velvet, and wool broadcloth, lay pattern in one direction, with the nap running downward.

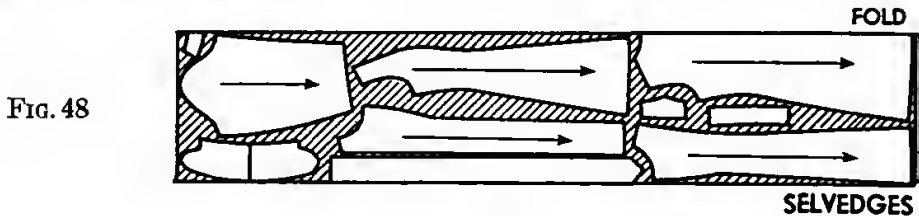


FIG. 48

FOR PLAID OR LARGE CHECKED MATERIAL

In order to have the stripes match at corresponding seam edges, place pattern on the goods with the corresponding notches on a definite stripe. If material has a one-way striped design, pattern must be laid all in one direction as in nap materials.

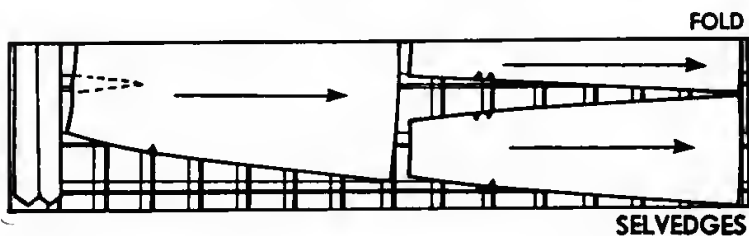
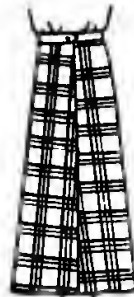


FIG. 49

Matching Plaids, Stripes, etc.

1

The wrong way of matching plaids. This is caused by inaccurate matching while cutting the garment.



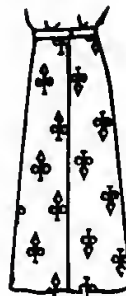
1



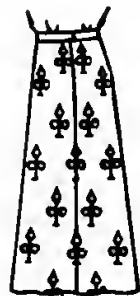
2

2

The correct way of matching stripes at seams. After cutting, it is also important to pin the matched seams, stripe on stripe, before joining seam.



3



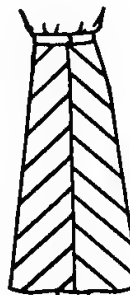
4

3

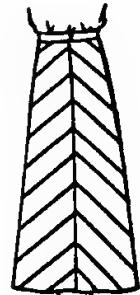
The wrong way of cutting one-way design material. The pattern should have been laid all in one direction when cutting garment, as for nap materials.

4

The correct way. Illustration shows design going in one direction, which adds to the beauty of the style.



5



6

5

The incorrect way. Stripes do not match at the seam. This is usually caused by careless cutting.

6

The correct way. This garment is cut on the bias of the goods, and the same method of matching the stripes is used for plaids or checks.

LIBRARY
COLLEGE OF AGRICULTURE
UNIVERSITY OF WISCONSIN

MADE IN U.S.A.

Pattern Adaptation

To change a pattern to a different style requires a fundamental knowledge of the construction of a pattern. It is therefore important to understand the purpose of the darts in the waist, skirt, and sleeve.

The darts in the front of the waist give the garment the proper fit over the bust. As a rule, the darts point toward the breast point, whether from the shoulder, side, or waist. This gives the front the required cup shape fit. Shoulder tucks or gathers give the same fitting value in front, but the darts are more tailored in appearance.

The elbow dart in the sleeve gives the shaped sleeve the necessary elbow ease.

The darts in a plain skirt give a smooth fit from the waist to hip.

Generally, a plain foundation dress pattern has a side dart in the waist front, a neck dart in the back, an elbow dart in the sleeve, and a waist dart in the skirt back.

Line *A* across front is about $\frac{1}{4}$ " shorter than *E* across back.

Chest line *B* on front is about $\frac{3}{8}$ " shorter than *F* across back.

Line *C* on front is about $\frac{1}{2}$ " longer than line *G* across back.

Shoulder line *D* on front is about $\frac{1}{4}$ " shorter than *H* on back.

Point *I* on skirt front is $\frac{1}{2}$ " lower on the waistline of the figure than point *J* on skirt back.

The cap height of the plain sleeve, from line *K* to point *L*, is about $\frac{1}{3}$ of armhole circumference. *For example:* The finished armhole measurement is $16\frac{1}{2}$ "; cap height is $5\frac{1}{2}$ ". The sleeve grain line is squared from line *K*.

The hipline on skirt is 7" below waist.

$\frac{1}{2}$ " seams are usually allowed on all edges except center front and back.

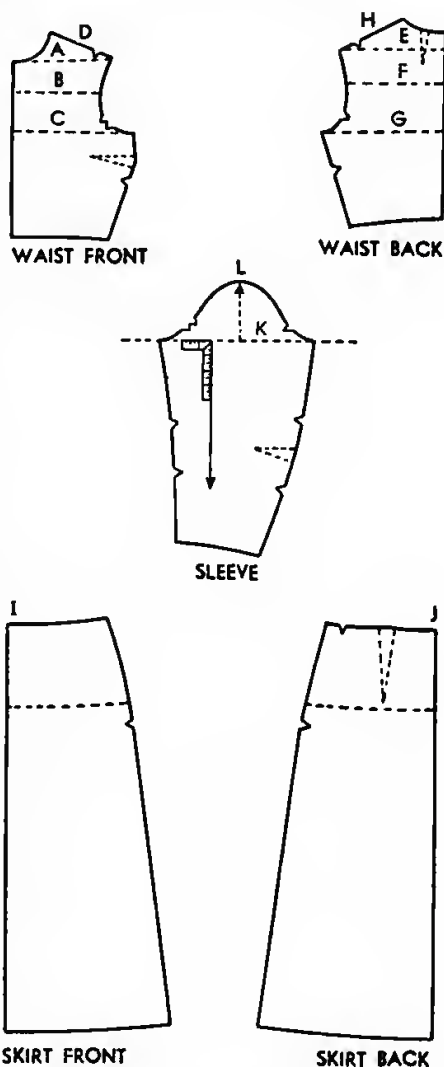


FIG. 51

Pattern Adaptation (Waists)

CHANGING SIDE DART TO SHOULDER DART

Illustration shows front of waist with shoulder dart fitting.

1. Using the side dart foundation, first trace front on another sheet of paper; then mark position for dart from center of shoulder to 1" from side dart. Mark sections *A* and *B*.

2. Cut out front and slash along shoulder dart line between *A* and *B*; then close up side dart to form the shoulder dart.

3. Trace front on another sheet of paper and mark shoulder dart in dotted lines to complete the pattern, as illustrated.

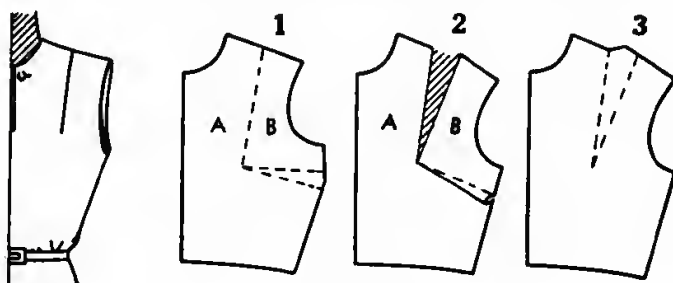


FIG. 52

CHANGING SIDE DART TO SHOULDER TUCKS

Sketch shows front with three shoulder tucks, about 1" apart and about 4" long.

1. Trace the side dart foundation and mark position for the tucks as follows: First draw the center tuck line as described above for the shoulder dart, detail 1; then draw a line 1" each side of the center line, and mark sections *A*, *B*, *C* and *D*.

2. Cut out front and slash along the three lines; then place front over another sheet of paper and close up the side dart to spread sections *A*, *B*, *C* and *D* evenly for three shoulder tucks. Pin to position.

3. Trace front and mark shoulder tucks in dotted lines, making the left tuck 4" long, center tuck $3\frac{3}{4}$ ", and the right $3\frac{1}{2}$ ".

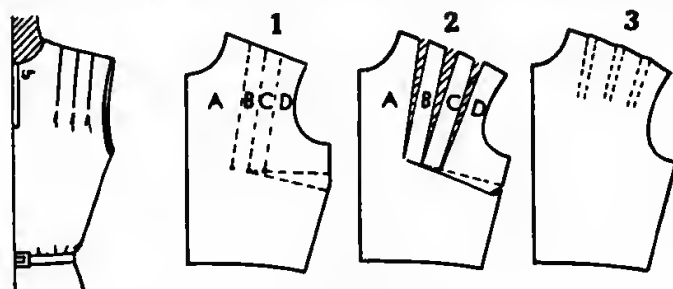


FIG. 53

Pattern Adaptation (Waists)

CHANGING SIDE DART TO FRONT SHIRRING

This style shows front with great amount of fullness gathered at shoulder and waistline.

1. Trace side dart foundation and draw a straight line from center of shoulder to center of waistline, marking sections *A* and *B*.

2. Cut out front; then slash from top and bottom to side dart, before closing the side dart. The spread at top and bottom provides for fullness at shoulder and waistline but not enough for this style front.

3. Place sections *A* and *B* about 2" further apart for required fullness. Then trace to complete front.

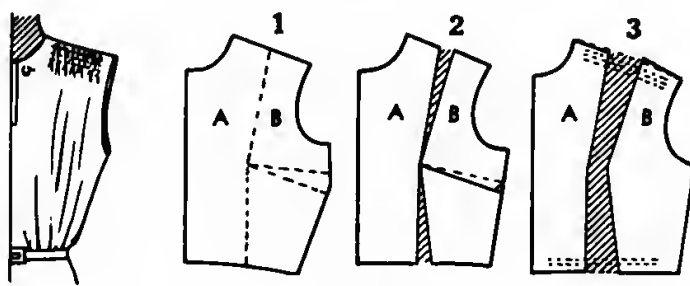


FIG. 54

CHANGING FRONT TO ARMHOLE SLASH GATHERS

1. Trace side dart foundation; then draw a straight line across from center of armhole, making the length of the line $\frac{2}{3}$ of the width across chest. From the center of this line, draw a vertical line down to the side dart and mark sections *A* and *B*.

2. Cut out front and slash across from armhole and down to side dart; then close up the side dart to spread front between *A* and *B* for gathers.

3. Place slashed front on another sheet of paper and trace to complete front.

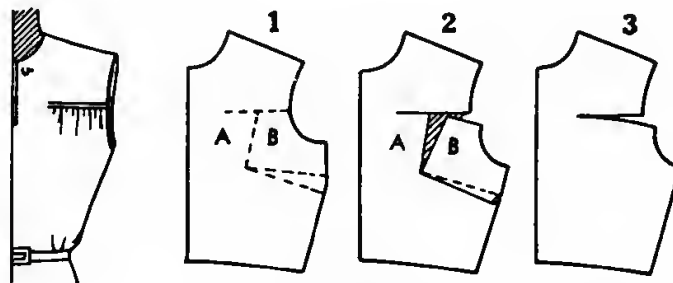


FIG. 55

Pattern Adaptation (Waists)

SQUARE NECKLINE

1. Trace side dart foundation; then draw square neckline about $2\frac{1}{2}$ " deep and $2\frac{1}{2}$ " across. To change from side dart to waist gathers, draw a line from center of waistline to side dart, and mark sections *A* and *B*.

2. Cut out front and along new square neckline. Slash on line between *A* and *B*; then close up side dart to spread between *A* and *B* for fullness at waistline.

3. For more fullness at waistline, add about 1" to side seam at waist, to nothing at armhole, as shown by dotted lines.

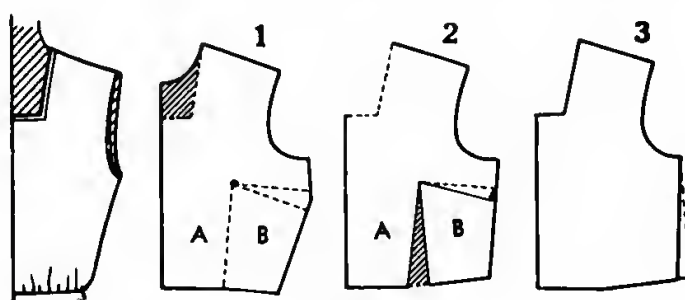


FIG. 56

V-NECKLINE

1. Trace front foundation; then draw V-neckline about 4" to 5" deep (maximum depth is 5", especially for ladies' sizes). In order to change side dart to waist dart, draw a line from center of waistline to side dart, and mark sections *A* and *B*.

2. Cut out front along new V-neckline and slash on line between *A* and *B*; then close up side dart to spread for waist dart.

3. Place front on another sheet of paper and trace, marking waist dart in dotted lines.

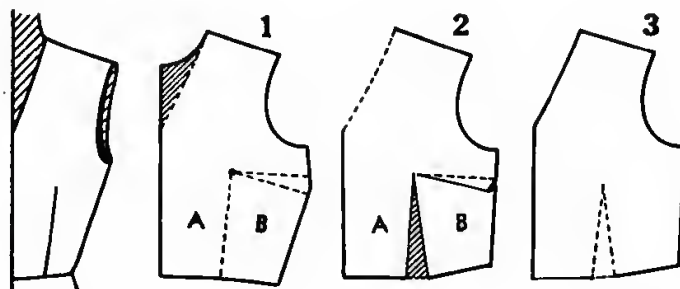


FIG. 57

Pattern Adaptation (Waists)

FRONT WITH REVERS

1. Trace front foundation; then draw V-neckline about 5" below high neckline. Make the revers about $2\frac{1}{2}$ " at widest part and about 2" below center of shoulder, as shown by dotted lines. Change side dart to armhole dart by drawing a line from deepest part of armhole to side dart. Mark sections *A* and *B*.

2. Cut out front and along V-neckline; then slash on line between *A* and *B* and close up side dart to spread at armhole for dart. Place front on another sheet of paper; then trace revers, making front and revers in one section.

3. Mark armhole dart and rolling lines for revers in dotted lines.

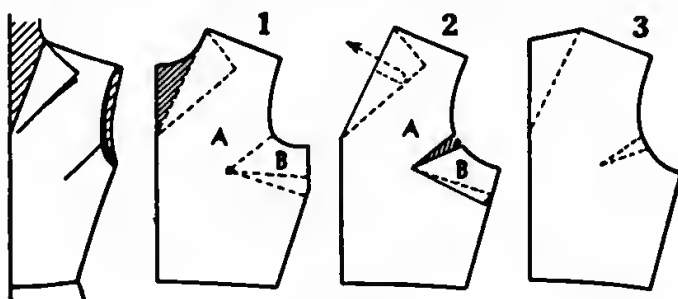


FIG. 58

COWL NECK DESIGN

Sketch shows front with three drape folds forming the cowl neck.

1. Trace V-neck front; then draw the lines where allowance is to be made for fullness for cowl neck, as shown by dotted lines. The spaces at center front between sections are *A*, $\frac{1}{4}$ "; *B*, 1"; *C*, 1".

2. Cut out front; then slash along the lines between *A-B-C*, and on the line between *C* and *D* to side dart only. Draw a squared outline; then close up side dart and spread sections *A*, *B*, *C*, and *D*, placing the front against squared outline. Trace to complete front.

3. Front must be cut on the bias of goods to give the fold of the drapes the required softness necessary for the cowl neck.

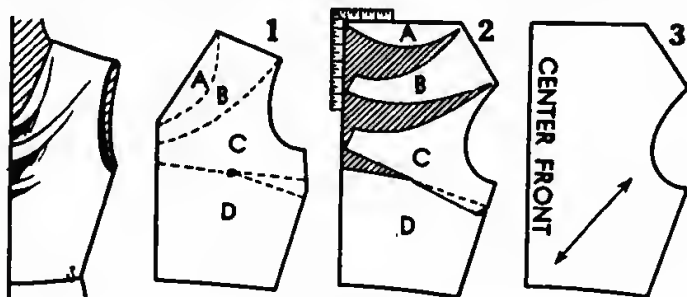


FIG. 59

Pattern Adaptation (Sleeves)

CHANGING PLAIN SLEEVE TO GATHERED SLEEVE

Illustration shows sleeve with great amount of fullness at wrist.

1. Use the sleeve foundation to develop any style of sleeve, as shown in these four fundamental problems.

2. Using the sleeve foundation, close up the back elbow dart to nothing at front; then divide sleeve into four equal parts, but omit the center line and mark the sections *A*, *B*, and *C*.

3. Cut out the sleeve; then slash along lines between *A-B-C* and spread for fullness, making the front spread $\frac{2}{3}$ of the back spread. This proportion provides the usual extra fullness in back. Lengthen back of sleeve about $\frac{1}{2}$ ", as illustrated. Make wrist band 1" wide finished.

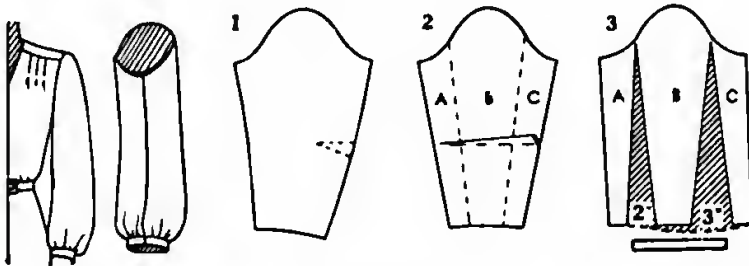


FIG. 60

CHANGING PLAIN SLEEVE TO DART SLEEVE

Sketch shows seam in back of sleeve from elbow to wrist.

1. Trace sleeve foundation; then divide lower line into four equal parts and draw line to elbow dart, as illustrated.

2. Cut out sleeve and slash from lower edge to dart; then close up elbow dart to form back dart.

3. Allow seams on edges of dart to complete the sleeve.

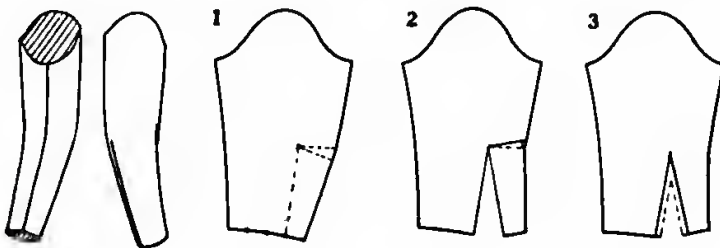


FIG. 61

Pattern Adaptation (Sleeves)

CHANGING PLAIN SLEEVE TO SHORT CIRCULAR OR CAPE SLEEVE

1. Trace sleeve foundation and draw short sleeve line slightly curved, making sleeve about $\frac{1}{4}$ length of underarm seam.
2. Divide sleeve into four equal parts, marking sections *A*, *B*, *C*, and *D*.
3. Cut out sleeve and slash along lines between *A-B-C-D*; then place on another sheet of paper and trace, spreading lower edge of sections *A*, *B*, *C*, and *D* about 4" apart to allow for fullness in sleeve.

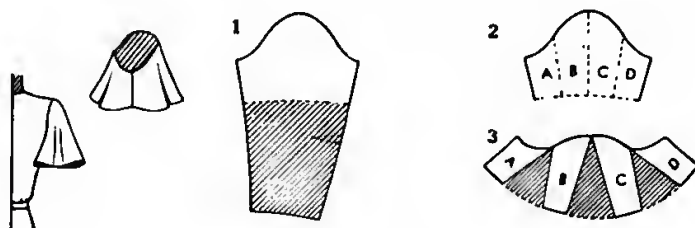


FIG. 62

CHANGING PLAIN SLEEVE TO SLEEVE WITH FULLNESS AT TOP

This sleeve is sometimes called a "leg-of-mutton sleeve," which was very popular in the "Gay Nineties."

1. Trace sleeve foundation and draw a line down from center of cap; then to each side, a little above the elbow dart. Mark sections *A*, *B*, and *C*.
2. Cut out sleeve and slash between sections *A-B-C*; then trace on another sheet of paper, spreading sections *A* and *B*, about 5" for fullness at top of sleeve.
3. Mark shirring lines along top of cap to within about 5" each side of sleeve.

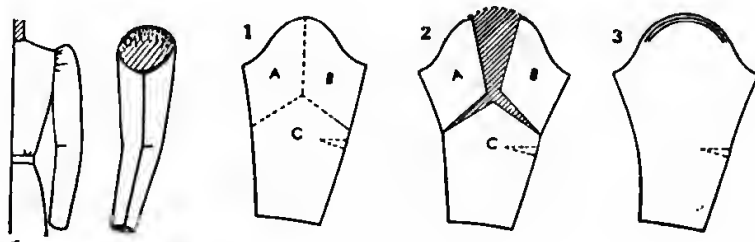


FIG. 63

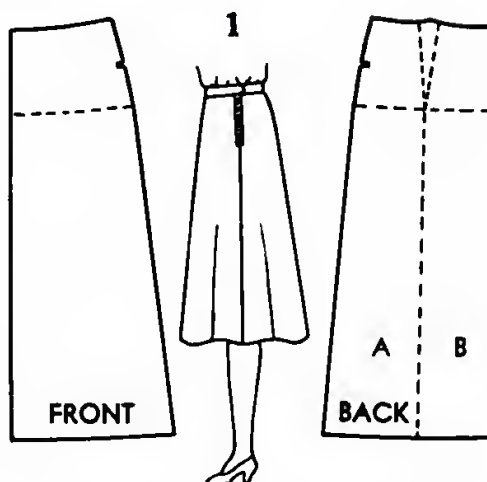
Pattern Adaptation (Skirts)

CHANGING PLAIN SKIRT TO SLIGHTLY FLARED SKIRT

Illustration shows two-piece skirt with slight flare at lower edge, and no darts at waistline.

1

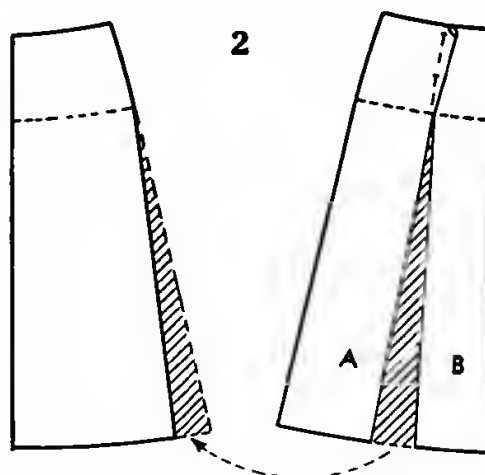
Use skirt foundation to trace front and back. Draw a line in back from dart at hip-line to bottom, and mark sections *A* and *B*.



2

Cut out back and slash along line between *A* and *B* from bottom to hipline; then close up dart to spread at bottom for fullness. This eliminates the dart in back.

Add the same amount of back increase to side seam of front, from hip to bottom, as shown by dotted line.



3

For additional flare in skirt, add to side seam of front and back, from hipline to lower edge.

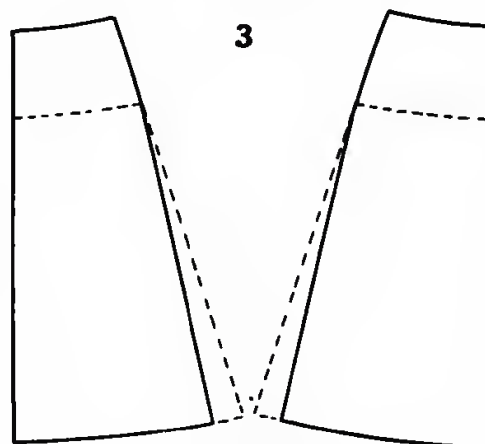


FIG. 64

Pattern Adaptation (Skirts)

CHANGING PLAIN SKIRT TO SIX-GORED SKIRT

Illustration shows skirt slightly flared at lower edge.

1

Trace skirt foundation; then divide front into two sections as follows:

First divide hip and bottom line into thirds. Draw a straight line from bottom, through hip, to waistline as illustrated. This makes section *B* twice as wide as *A*.

Repeat same process for back. (Mark sections *C* and *D*.)

Reduce at waistline to fit the figure by making the reduction at the line between *C* and *D*, twice as much as in front, between *A* and *B*.

2

Cut out sections *A*, *B*, *C*, and *D*; then trace on another sheet of paper, and allow for seams (usually about $\frac{1}{2}$ " for each seam).

The grain line on the side sections *B* and *C* is squared from the hipline as in 1.

3

For the additional flare at lower edge, allow about 2" at each seam to nothing at hip, as shown by dotted lines.

To complete pattern, make corresponding notches at seam edges.

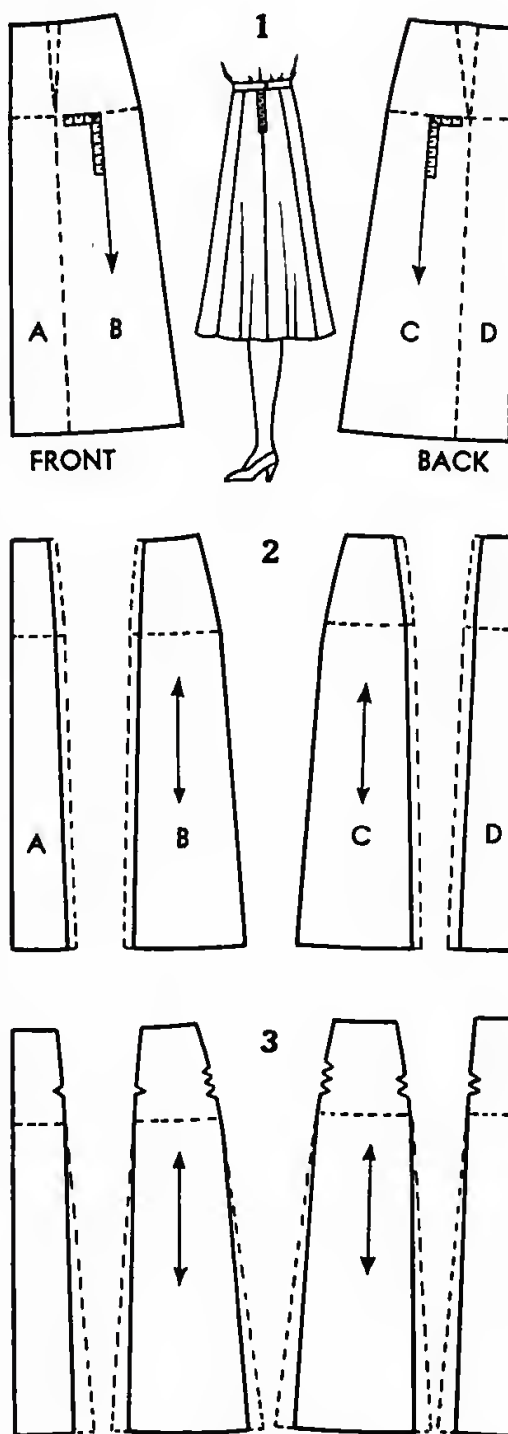


FIG. 65

Pattern Adaptation (Skirts)

PLAITED SKIRT ATTACHED TO YOKE

1

Trace skirt foundation; then cut out front and back, and mark sections *A*, *B*, *C*, *D*, and *E*.

2

For front, cut through hip-line.

Trace section *A* and allow seam at lower edge to complete the yoke front.

Trace section *B* and make front pattern as follows:

For accordion or side-plaited skirt, make front pattern 3 times as wide as the upper edge of section *B*.

For shirred skirt, make front $1\frac{1}{2}$ times as wide as the upper edge of section *B*.

Allow seam at upper edge.

3

For back, cut through hip-line; then close up dart and trace yoke, adding seam at lower edge.

Repeat same process for back of skirt as for the front.

Make corresponding notches.

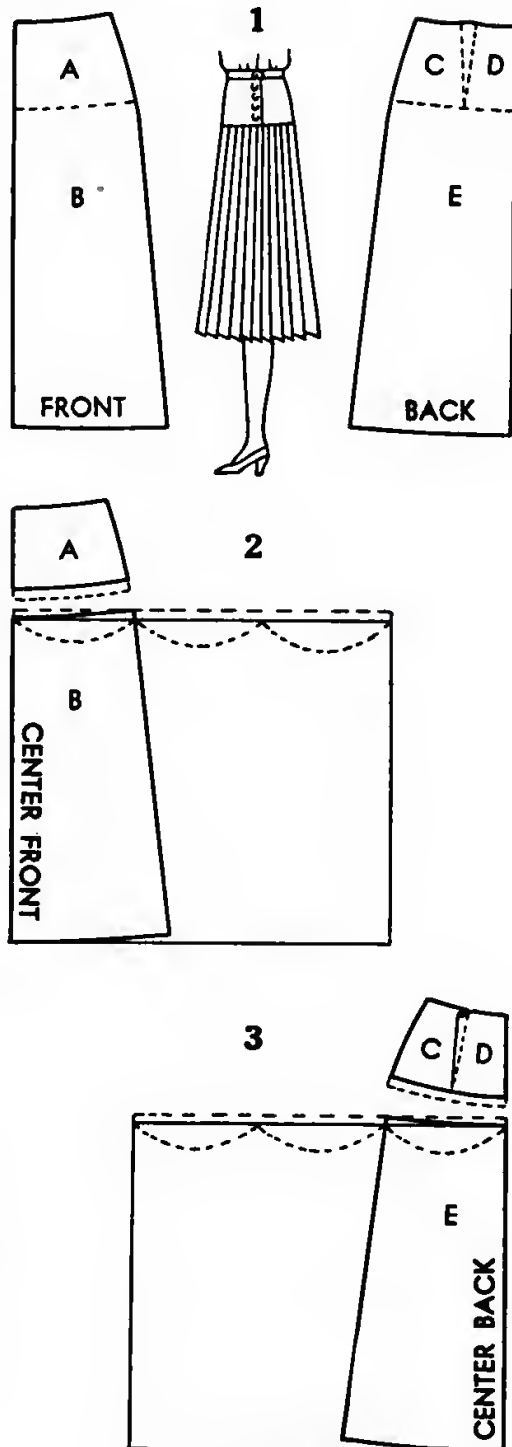


FIG. 66

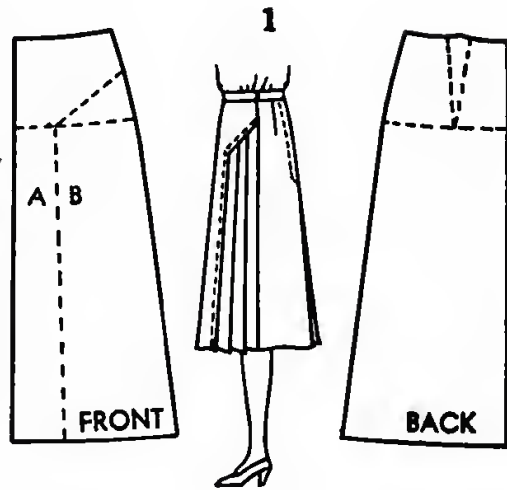
Pattern Adaptation (Skirts)

SKIRT WITH PLAITED SIDE IN-SET, AND INVERTED PLAIT IN CENTER BACK

1

Trace skirt foundation; then divide front into two sections as follows:

First divide hip and bottom line into thirds; then divide side line between waist and hip into half. Connect these points as illustrated, marking sections A and B.

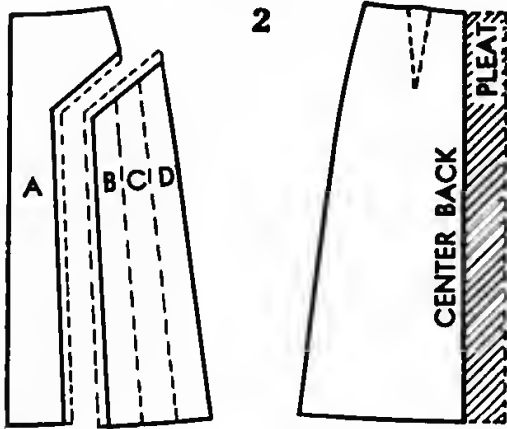


2

Cut out front sections and trace section A, allowing seam as shown by dotted lines.

Before allowing for plaits, divide section B into three equal parts, marking them B, C, and D. Add seams at left and upper edges.

For inverted plait at center back, add about 3" to 4" along center back line.



3

Cut out sections B, C, and D, and spread them apart about 3" to allow for each plait. Trace to complete the inset section.

Make corresponding notches.

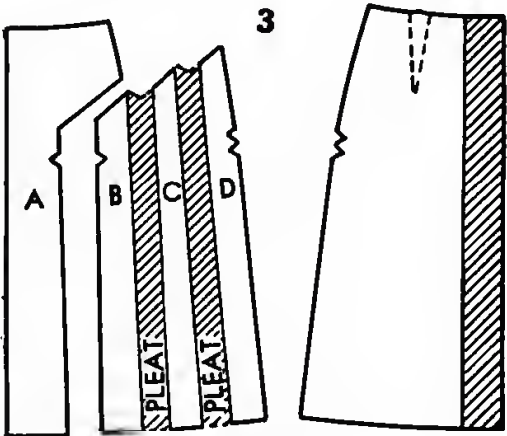


FIG. 67

QUESTIONS

1. (a) What is a foundation pattern? (b) How do fashion artists assist in creating new designs?
2. (a) Name four groups of sizes in the classification of sizes. (b) What is the difference between the junior miss size 14 and a girl's size 14?
3. Explain how to take measurements.
4. (a) What happens if there is no ease allowance across back in the garment? (b) What disadvantage is there if a sleeveless dress has less than 2-inch ease allowance around bust?
5. (a) Name some of the noticeable characteristics in the average figure. (b) Explain what effect style lines have on the woman's figure. (c) What lines are best for the short figure? For the tall? (d) What effect has the size of the collar on the size of the head? The necklines on the neck? (e) Explain the effect of raglan sleeves on various types of shoulders.
6. (a) How are patterns ordered for women's coats, dresses, or undergarments? For skirts? (b) Why is it sometimes best to order a skirt pattern by hip measure?
7. (a) What effect have diagonal stripes on the women's figure? (b) Name some of the advantages and disadvantages of large- and small-figured materials for various types of women's figures.
8. (a) Explain the best method of altering commercial patterns. (b) How should hem lines be marked on a circular skirt? (c) When should patterns be adjusted, and why?
9. (a) Why is it important to press the material before laying out for cutting? (b) What causes the crosswise threads in some materials to run off at an angle? (c) When is it necessary to lay out material with a double fold of goods?
10. Explain the importance of pressing pattern pieces before laying them on the material for cutting.
11. What is the purpose of the grain lines on the pattern pieces?
12. (a) How should pattern be laid on nap materials? (b) In what direction should the nap run when pattern is laid on (1) velveteen, (2) woolen broadcloth, (3) corduroy, (4) chiffon velvet? (c) How should pattern be laid on plaid or large checked material?
13. Explain the importance of cutting and matching plaids, stripes, or one-way designed materials.

14. (a) Why are darts used in (1) front of waist, (2) sleeve at elbow, (3) skirt? (b) What are the most popular dart variations used in front of waist?
15. How is the proper grain line marked on a sleeve foundation?
16. How much lower is the waistline in center front than in center back of the skirt?
17. (a) Name some of the variations in necklines. (b) What should the maximum depth be in a V-neckline for ladies' sizes?
18. (a) What is a cowl neck design? (b) Explain how to plan a cowl neck.

REFERENCES

- Eddy, Josephine F., and Wiley, Elizabeth, C. B. Pattern and Dress Design. Houghton Mifflin Co.
- Erwin, Mabel D. Practical Dress Design. Edwards Bros., Inc.
- McCall Corporation. Dressmaking Made Easy. (Booklet.)
- Rohr, M. Foundation Pattern Drafting. (Booklet.)
- Rohr, M. Pattern Drafting and Grading.

CHAPTER 6

CONSTRUCTION OF AN ENSEMBLE

Importance.—What an attractive dress! How smart and becoming is the dress that Jane has on today. Such phrases as these make us realize how dependent we are upon the appreciation of the principles of art and their application in our daily living.

When we decide to purchase or make a new dress we generally think first in terms of a becoming color; and in a general way we have some idea of style lines that we have found to be becoming.

However, recognition of the value, observation, and appreciation of the art principles applied to dress is not the only factor which must be considered in our selection of designs for garments. Good taste in dress presents, in addition, the problems of relating the prevailing silhouette to the individual figure, as well as a knowledge of and ways of adapting the fundamental types of construction and structural lines found in dress construction. Since a knowledge of these factors is so essential, let us consider them in order to understand how they can aid us to dress in good taste.

Silhouette and Fashion Changes.—Observation and noting of the seasonal changes in the silhouette can aid materially in our selection of appropriate attractive clothing. What are the fashion points we must consider before selecting our style? Are there any silhouette changes which it is important for us to note? Does the present-day silhouette follow closely the structural outline of the body, or is it extreme in flares, distended in parts, giving a distorted appearance? What are the variations in types of sleeves? Are they narrow, full, long, or short? Examine carefully where the shoulder seams are

placed this season. Look at the armseye. Is it at the normal armseye, higher on the shoulder, or does it give the appearance of falling off the shoulders? Has there been a change in the neckline this season?

Are the skirts full, straight, or flaring? How is this effect determined—by plaits, gathers, or circular flares? Where is the fullness placed? What is the fashionable length of the skirt this season?

Will these current silhouette changes be becoming to me or must they be modified and adapted to my use?

Fundamental Types (Shapes of Parts) of Construction.
—It is exceedingly important for us to study and be able to recognize the fundamental types of construction that are being used in skirts, waists, sleeves, and collars. Each shape has its own style effect, as well as certain characteristics which determine its becomingness to the individual figure.

The variations in shapes that are of fundamental importance are considered in the following illustrations:

1. Compare the effects of the shapes found in the kimono, raglan, epaulette, and set-in sleeves. What are their effects on the width of shoulders and in the lengthening of waistlines?

2. How does the high, rolling collar compare in shape and effect with the collar lying flat on the shoulder, when the neck is short and full or long and slender?

3. Study the shapes and placing of yokes on blouses and skirts. Note the effects that are possible by changes in size and shape of these sections.

4. Compare the effects of the following shapes of sleeves with their varying effects on the individual figure:

- (a) The leg-of-mutton sleeve with its extended fullness at the shoulder, but close fitting at the wrist.
- (b) The bishop and bell sleeve with exaggerated width at bottom, but close fitting at armseye.
- (c) The sleeve close fitting at armseye and throughout its length.

- (d) The gathered sleeve, full at armseye and throughout its length, ending either above or below elbow, or at the wrist.

Fundamental Structural (Seam) Lines.—We must also make an analysis of the fundamental structural lines of dress, know how they can be modified and adjusted for various types of figure. The following are illustrations for the study of structural lines:

1. Note the differences in line direction of the two-piece, the many-gored, and circular skirts.
2. What effect do the slant and placing of the shoulder seam have on the erect or round-shouldered figure?
3. Study the different effects that are possible with the armseye curve.
4. How does the placing of the waistline and hemline affect the proportion of the figure?

Each different form of construction and every change in the placing or modification of the lines of a garment create a different style effect. Therefore, if we have a clear understanding of these changes and effects, we should find it easier to apply the principles and laws of designs and line more intelligently to our clothing problems. Review Chapter 1 and note the effect of these factors on the human figure.

In Chapter 5 fundamental types of construction and structural lines were illustrated with explanations of the effects of each upon the individual figure.

Construction of an Ensemble or Silk Dress—Selection and Use of Pattern

Choice of Garment.—Perhaps in analyzing your individual clothing needs you have decided you need an ensemble or a silk dress. Since you are ready, now, to learn how to handle silk fabrics, either of these problems will be a wise choice.

SELECTION OF STYLE.—You will, of course, after your analysis of the current silhouette, wish to select a style that is smart and suitable for the garment you have in mind, as well as

appropriate for the type of fabric you have seen and liked in style shows or shop displays. You will then enjoy making the garment with enough enthusiasm to carry you over the difficulties you may find in its construction.

Selection of a Commercial Pattern.—In selecting your pattern, you will, of course, keep in mind the fact that patterns vary.

VARIATIONS FOUND IN COMMERCIAL PATTERNS.—Although all the commercial pattern companies use the measurements issued by the United States Government, each pattern company has its own method of using the measurements; therefore, the patterns will vary in some respects. You have used one or more types of patterns and have studied patterns issued by different pattern companies. How did they differ in slant and length of shoulder, shape of armseye, and allowance for ease? These are the points at which we may find differences that will cause one make of pattern to fit one type of figure better than another.

COST OF PATTERN.—Although the price you pay for a pattern is a small item in the cost of a garment, its choice must be carefully considered. The selection of a pattern with good lines, notches, and perforations, accurately marked with well-planned aids for construction, is an economy where the cost of the finished garment is considered. Do not be tempted to buy a pattern merely because it is cheap.

ACCURACY IN MEASUREMENT ESSENTIAL.—Since one's size is apt to vary from season to season and the size you wear in ready-made garments is not accurate (because of variations in measurements found in ready-to-wear garments) accurate measurements should be taken over the same type of foundation or undergarments usually worn. Measurements should not be taken over heavy dresses, coats, or sweaters. If a thin dress is worn, measurements can be taken without removing dress.

The secret of success in retaining the style and good lines of any pattern is to buy the correct size of pattern.

It is also important not to destroy the style lines of a pattern by incorrect alterations, and since figures vary from normal at many points, the fitting of a garment will be simpler if alterations are made accurately before cutting garment.

Outline to Be Followed in Use of Pattern.—For best results in using the pattern selected, it is important to observe certain rules.

1. **READ CAREFULLY THE INSTRUCTIONS ON THE PATTERN ENVELOPE.**—Each pattern has its particular specifications and points to be studied.

2. **LOOK AT THE TABLE OF MEASUREMENTS.**—Check your size and compare with your individual measurements. A size 14 corresponds to a 32-inch bust measure. Size 16—34 bust.

3. **THE PATTERN ENVELOPE SHOWS MORE THAN ONE VIEW.**—Select the one you like and although it may be only a collar or a sleeve that will need to be changed, now is the time to decide upon changes before cutting out your garment. If you plan to use any other details not on the view selected, be certain that they are suited to the silhouette and that they will harmonize with the design.

With a colored pencil draw around the view you decide to construct. Remember that patterns are planned, to the smallest detail, for a harmonious effect. Do not destroy this effect by the careless use of a collar or detail out of harmony. If you are not careful in this respect, the effect of the whole design may be spoiled.

4. **IDENTIFY EACH PATTERN PIECE.**—Study the pieces, note the notches, numbers, and placing. Note also how the pieces are joined. Determine just what part each piece plays in the garment you are constructing.

With a colored pencil make a circle around any perforations that require tailor's tacks or chalked thread marking, such as plaits, darts, tucks, or gathers. If there are plaits, it will aid if you place an arrow at each group of perforations o ———> o to indicate how the material is to be plaited.

5. **STUDY THE CUTTING CHARTS WITH ATTENTION.**—All the pieces of the pattern are illustrated with each notch and perforation carefully marked. Symbols for joining the parts of the pattern together are indicated by notches. One \checkmark matching one \checkmark of adjoining section. Two $\checkmark\checkmark$ matching $\checkmark\checkmark$. These symbols are either printed or cut into pattern. Darts

are usually indicated $\overset{o}{\circ} \overset{o}{\circ}$ by perforations. Plaits by parallel $\overset{o}{\circ}$

rows of perforations of different diameters $\overset{O}{\circ} \overset{o}{\circ}$ or by a solid

and dotted line $\left| \begin{array}{c} | \\ | \end{array} \right|$. Grain line is indicated on all patterns for its placing is of the utmost importance in the hang and fit of a garment.

Grain of Fabric.—When we say the grain of the fabric, grain line or “on the grain” we may mean either a straight lengthwise or a straight crosswise thread of the fabric.

LENGTHWISE THREAD.—The lengthwise threads or warp run parallel with the selvage. They are strong and have little give or stretch due to more twist in the yarn. (Fig. 68.)



FIG. 68. Lengthwise and Crosswise Folds

CROSSWISE THREAD.—The crosswise or filling threads extend across the fabric at right angles to warp and selvage. The filling threads, due to less twist in yarn, are less strong, more elastic, and liable to stretch more or less depending upon the firmness of the fabric. What is liable to happen if the crosswise grain is used in place of the lengthwise grain?

Testing the Pattern.—Since patterns are usually made for the average figure, test the pattern before placing it on the fabric. There are three methods in general use, as follows.

1. **FITTING THE PATTERN.**—Pin the parts of the pattern with its corresponding notches together, pinning the seam as accurately as you would any garment. Put the pattern on and adjust it at center front and center back. Examine it to see if the neckline, armseye, the length of waist and skirt are all correct for you. If there are divisions in the blouse or skirt, such as yokes or inserted plaits, be sure that they are in good proportion for you while fitting the pattern.

When testing the pattern, the length of the skirt or dress should be adjusted to your most becoming length. Stand in front of a mirror where the lower edge of the pattern can be seen. Raise and lower the pattern until your most becoming length is found. Unless the garment has an uneven finish at bottom, the skirt should be hung an even distance from the floor around the entire skirt.

2. **TESTING MEASUREMENTS.**—Test the pattern by the use of your individual measurements in checking and comparing with corresponding pattern measurements (note allowance for bust, hips), to see if they agree. This method is suitable for those girls with some experience in the use of patterns.

3. **TESTING WITH INEXPENSIVE FABRIC.**—If the fabric is expensive or there is doubt regarding the fit, lines, suitability, or yardage of fabric, cut the garment from unbleached muslin or an inexpensive fabric before using your expensive fabric.

VALUE OF TESTING PATTERN BEFORE PURCHASING FABRIC.—A better estimate can be made for buying required width and yardage of fabric. Testing will aid in constructing the garment, for in testing all the parts are pinned together and fully understood before the garment is cut. It will not only aid in assembling the dress, but it often prevents mistakes in cutting.

For alteration of patterns see Chapter 5.

Selection of Fabric—Cutting

Wise Choice of Fabric.—Now that you have selected your pattern, tested and altered it, you do not want to spoil the effect of your finished garment by an unwise choice of fabric.

Fabrics have a definite responsibility in correctly showing the lines of the design. The weight, the texture, and color all have a definite part in determining the success and beauty of the finished garment.

Therefore, the next step, following the purchase of the pattern, is the selection of a fabric of weight and texture suitable for the style of pattern. For this it is advisable to consult the suggestions and chart on the pattern envelope and be guided by their advice. The fabrics listed are not only those that are smartest for the season, but they are also best suited for the style of garment.

The manufacturers of fabrics and the designers of clothing have worked together to produce those fabrics—new in weaves, designs, colors and textures—which determine the fashion appeal and attractiveness of each season's clothes.

In selecting a fabric, remember that the design, color, and texture are all important. Some fabrics and designs can be worn better than others by certain types of figures. (Consult Chapter 1.)

WIDTH OF FABRIC.—Another important point that must be emphasized is, buy the correct width of fabric for your pattern. A garment which can be cut without piecing from a wide fabric, may require unfortunate piecing if a narrower fabric is used.

Aids in Acquiring a Professional Appearance in Our Dress Construction.—Our next point of emphasis is in avoiding an amateur look and to help in acquiring that professional touch which we all admire, depends upon good technique throughout the construction of the garment. It is essential to use accuracy and care in following directions in the use and testing of patterns, in cutting, in fitting, in pressing, and in the selection of appropriate seams and finishes for the fabric and garment—in fact, care in all those details that make or mar the smart appearance.

For aid in selection of suitable fabrics consult Chapter 5, pages 113-115.

Inspection of Fabric.—There are several points to consider when inspecting the material.

1. **MEASURING FABRIC.**—Measure the fabric to be sure that you have the correct yardage and width before cutting into fabric.

2. **FLAWS IN FABRIC.**—Spread fabric on table or hold over arm in a good light and examine carefully to detect any imperfections in design, weave, or finish. These flaws should be clearly marked by encircling with a thread or with pins. This will help you either to avoid them or to place the pattern so that imperfections will come at an inconspicuous place on the garment.

3. **VARIATIONS IN COLOR, SHEEN, OR DESIGN.**—Hold the fabric up so a good light shines on it. Study it to see if there is a decided difference between the right and wrong sides, or between the up and down of the fabric. With the newer fabrics this is especially important. Any variation in either sheen, color, or design will spoil the effect of the garment. Mark the right side of the garment by checking with tailor's crayon so no mistakes will be made.

Preparation of Fabric for Cutting.—See Chapter 5 for further discussion of this.

1. Press fabric if creased.

2. Straighten ends of fabric. Examine end of fabric to see if it has been cut or torn by salesgirl. If cut, straighten by drawing a thread, but be careful not to stretch the fabric out of shape in drawing threads. If the fabric was torn, the fabric may have been pulled out of shape. If the ends do not match, the fabric must be stretched back in shape as in Fig. 69.

3. Suggestions for folding fabrics (Chapter 5): Study your pattern and determine whether the pattern can be placed to advantage by making one middle lengthwise fold, by two lengthwise folds with selvages meeting in middle of fabric, or by one lengthwise fold at equal distance throughout its length—not in the middle, but wide enough to allow the placing of

parts of the pattern. One advantage of the latter folding is that you will have one wide lengthwise piece, instead of two narrow pieces.

Laying Fabric in Place.—Press all pattern pieces to remove all creases and folds.

Place the fabric flat on table. There should be enough space for fabric to rest flat on the table while pinning the largest pieces of pattern in place. In placing the pattern, the straight grain as called for in each piece is the important thing to consider.

SINGLE LAYER OF FABRIC.—Lay the fabric smoothly along the edge and length of the table. When using a single layer of fabric, have the right side up. This is important when

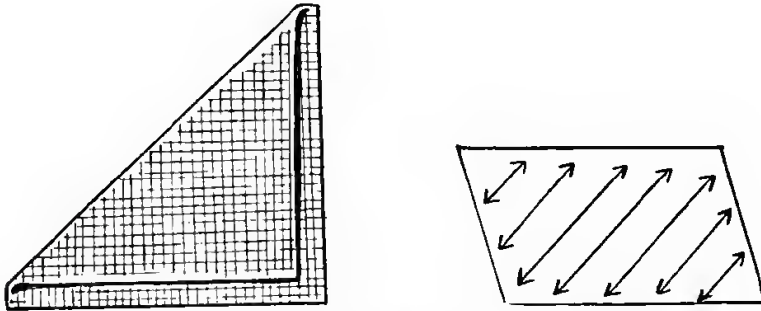


FIG. 69. Straightening Material by Stretching

matching designs or when the pattern is different for the right and left side of figure. In cutting the garment with a one-sided effect, the layout is planned so that each piece of the garment when cut will be in correct position on the figure. (Chapter 5, Figs. 47-50.)

DOUBLE LAYER OF FABRIC WITH FOLD LENGTHWISE OF FABRIC.—Fold one side over the other with right side of fabric inside, selvages coinciding, and pin together every 6 inches from selvage to fold. Begin at corner and pin selvages together every 12 inches, taking care that there is no fullness in either edge. Smooth the fabric free from wrinkles as you pin. (Chapter 5, Fig. 46.)

LENGTHWISE FOLD AT SIDE.—If the layout calls for a fold at one side of the lengthwise center, measure the widest part of the pattern section that is to be cut from the folded section. Fold the fabric so that the space between fold and upper selvage corresponds to above measurement. Be sure that the top selvage is the same distance from the fold the entire length. This will insure a straight grain on fold. (Fig. 70.)

Placing Pattern on Fabric.—We are now ready to place the pattern on the fabric.

FOR A TRIAL LAYOUT BEFORE PINNING.—Arrange all parts of the pattern on the fabric loosely, at first, as directed in the pattern layout for your view and width of fabric.

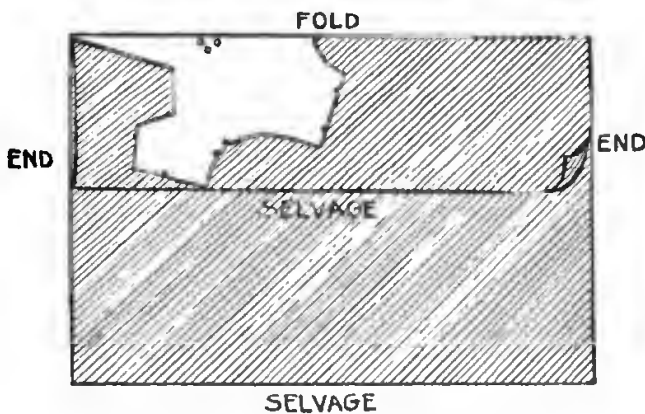


FIG. 70. Grain on Fold, Top Selvage

PLACING ON FOLD OF FABRIC.—Pattern marks indicating placing on fold of fabric must be placed directly on fold.

LOCATING STRAIGHT GRAIN OF FABRIC.—In pinning on the pieces that are not cut on a fold, be sure that the pattern is laid with the perforations that mark the grain line on a perfectly straight lengthwise or crosswise thread, as called for in pattern. Pin the grain line to position first, measuring each group of perforations; or mark from the selvage with your tape measure indicating grain line. Smooth the pattern from grain line and pin outer edge of pattern in place, pinning close enough so that pattern will not move. (Fig. 71.)

PIN SECURELY.—Use plenty of dressmaker pins (No. 4 or 5) when pinning pattern in place. There is less danger of disarranging or tearing of fabric with these sharper, better finished pins. If the pins, in pinning the pattern in place, are placed diagonally, inside the cutting line, there will be less danger of the fabric slipping. Use weights to hold the fabric, if there is any tendency to slip. This is especially important with crepes and sheers.

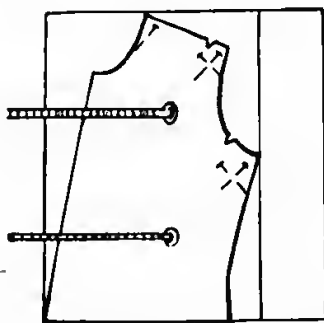


FIG. 71. Pinning Pattern in Place

Precautions to Take in Cutting Out Garment.—It will be necessary to take note of certain details before cutting out your garment.

HELPS IN CUTTING MATERIALS.—It sometimes helps in cutting to pin fabric and pattern on thin paper (for stretchy or sheer fabrics), for edges can be cut more accurately if reinforced with paper. If pins are placed $\nearrow \nwarrow$ crosswise at corners and occasionally at other places, this will also help to hold fabric in place. Always cut the parts double whenever possible. If necessary to cut two parts from one pattern, such as two sleeves or fronts of blouse from different parts of the fabric, and you are not sure that you have sufficient fabric, cut a second pattern from paper to place on doubtful piece.

SLEEVES.—Sleeves very often have to be cut separately, so care must be taken not to cut two sleeves for the same arm. To prevent this, if the fabric cannot be folded to cut double, be sure when placing the pattern for second sleeve, that you place the fabric, with the pattern up, on straight grain of second fabric with two right or wrong sides together.

TO PIECE FABRIC.—If necessary to piece, in cutting any section of pattern, match grain or design perfectly from right side, baste in place with right-side basting (see Fig. 82b), then cut out from pattern as though not pieced.

NOTCHES.—Always cut notches outside of pattern line. (Fig. 72.)

SEAM ALLOWANCE.—In cutting use long, sharp shears, following the edge of the pattern exactly if the fabric is firm and the seam allowance adequate. If the fabric frays, or if the seam allowance is not enough for well-finished seams, mark the necessary allowance and then cut with the same allowance throughout the pattern. Lay aside the parts of garment as they are cut, keeping the pattern pinned on until ready to assemble garment.

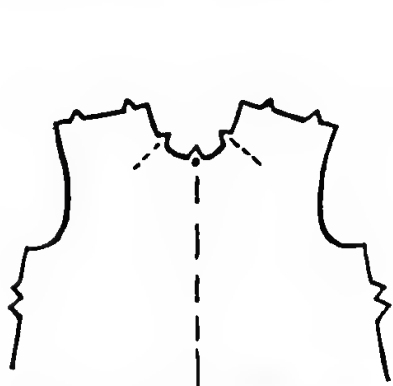


FIG. 72. Cut Notches Outside of Pattern Line

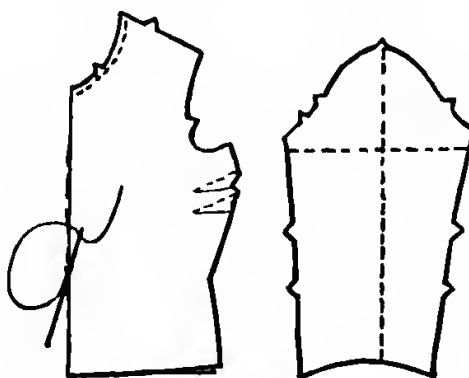


FIG. 73. Construction Marks

CONSTRUCTION MARKS.—On the center front, center back, and grain lines of sleeve place a long basting stitch with thread of a contrasting color. The location of center front, back, and sleeve will insure that the grain is not drawn out of place while fitting. These basting lines also help in locating pockets, collar, and trimmings, and in joining waist and skirt. (Fig. 73.)

BEFORE REMOVING PATTERN.—Be sure that all notches, center lines, and all perforations necessary for construction are marked by the method appropriate to fabric.

TO MARK NOTCHES.—Never cut inside the pattern line. On materials that do not fray, cut each notch outward while cutting around outline of pattern. Cut notches at center front and center back neckline, and at bottom of waist. On neckline and armseye, always mark notches with short running stitches at right angles to edge at center point of notches. These notches are important, and as they are often used last in constructing garments, the chalked and cut notches are apt to be lost. This will cause trouble when putting on collar or inserting sleeves. When the fabric frays readily, do not cut notches but depend upon chalked thread or running stitches to mark notches. (Fig. 72.)

PERFORATIONS.—For all perforations inside the seam lines, tailor tacking is the best method of marking. Although tailor tacking takes time, it is safer and more accurate. If in tailor tacking plaits, one color of thread or silk is used for the small perforations and another color for the large, more careful laying of plaits will result. (Fig. 74.) For description of method, see below under Methods of Marking Seams.

The more care and time taken now for accurate marking will save time and labor later on, and it will also result in a better and more accurately assembled garment with less handling.

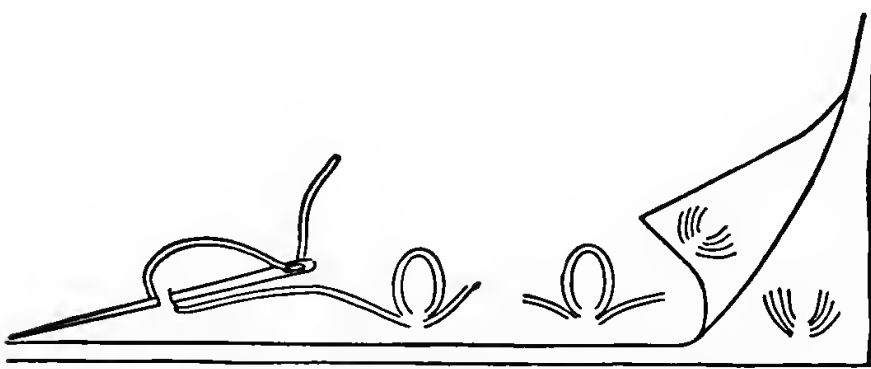
TO MARK SEAM LINES.—After marking all notches, perforations, and grain lines, determine the best method for marking seam lines (see below). Some patterns indicate the seam lines by perforations or broken lines. Others do not mark, but state the allowance. A $\frac{3}{8}$ -inch seam allowance is not enough to allow for alterations or finishing seams. Allow 1 inch on straight seams with $\frac{3}{8}$ inch on curves, if fabrics fray.

Whether you have cut around the edge of pattern or have made an extra seam allowance, it is important to mark the seam lines as indicated on pattern in some accurate way, as an aid in basting and stitching a straight seam. Stitching of a straight seam without some guide is difficult, and well-marked seams will help. Marked seam lines also help in putting the garment together for first fitting.

Methods of Marking Seams.—The method to be used for marking seams will vary with the type of fabric and the pattern selected. Several methods are listed here.

1. **TRACING WHEEL.**—For cottons and firm fabrics. Trace at center point of notches and seam lines, as indicated on pattern. Do not run tracing wheel back and forth—once, firmly held, is enough. See that the points are sharp, otherwise the fabric will be torn.

2. **CHALK BOARD.**—On many fabrics, a line traced with wheel does not show. In such cases, place the chalked board under the fabric to be marked and use the tracing wheel in the usual way. After one side is traced, remove the pattern,



Used for marking seams, plaits, tucks, or other necessary points of construction.

FIG. 74. Method of Making Tailors' Tacks

turn the fabric over with traced lines up, and trace on the seam lines just made. The chalk board is prepared by painting heavy cardboard or chalk board with moistened French chalk. Cover the painted board with coarse upholsterer's net.

3. **TAILOR BASTING AND TACKING.**—Thread the needle with a long, double thread. Take one or two loop stitches through each perforation and through both thicknesses of fabric. Pull the layers of fabric apart so stitches can be seen between the layers. Clip the threads, leaving tufts of thread on both sides of fabric. Darning cotton stays in better, and it can be used where material does not mar. (Fig. 74.)

4. **PIN MARKS WITH TAILOR'S CHALK.**—For plain firm fabrics, insert a pin in each perforation through both thicknesses of fabric; then mark the fabric on upper side by rubbing the chalk over pin. Turn over fabric and chalk and mark the other side over the pin before removing pattern. (Fig. 75.)

5. **CHALKED THREAD.**—This is one of the quickest methods. It can be used on solid colored fabrics and is especially satisfactory for thin fabrics which are firm enough for the chalk to show. Draw a double or not too finely threaded needle over a piece of soft chalk (either tailor's chalk or blackboard crayon). Draw the powdered thread through both layers of

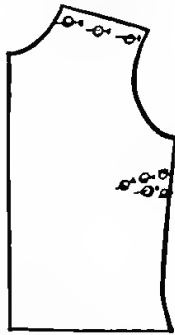


FIG. 75. Pins in Perforations,
Marked with Tailor's Chalk

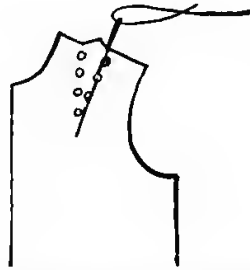


FIG. 76. Chalked Thread

fabric at perforations, lines, or notches. Renew the chalk after each stitch, if necessary. If this leaves a distinct mark and the garment is put together at once, this is sufficient. If not go over each mark with tailor's chalk. (Fig. 76.)

6. **CHALKING SEAM LINES.**—Remove seam allowance or press back with iron. Chalk on seam lines with tailor's chalk. This method can be used on loosely woven fabrics.

VALUE OF TAILOR'S CHALK.—Tailor's chalk is absolutely necessary in dressmaking. It is indispensable where accuracy is important; the marks can be easily erased. Lines can be corrected in the alteration and fitting of seams, necklines, and waistlines. Hem lines can be marked more accurately than with pins. On silk test to see if it leaves a mark that

cannot be erased; if it does, use common crayon sharpened on a slant or point.

Assembling the Garment

After marking all notches, center front, center back of blouse and skirt, remove the pattern from the fabric. Fold the pattern, replace it in envelope, ready to be referred to when necessary. Keep the directions before you to aid in putting the garment together.

Stay the Edges.—Stay all bias edges of fabric by stitching on the machine the width of the presser foot from the edge of all bias parts. If the fabric stretches and ravel easily or the edges are very bias, place thin paper underneath the fabric and stitch farther from edge through both paper and



FIG. 77. Staying Bias Edges by Stitching

fabric. The paper can be removed easily. If the fabric is sheer or stretches excessively, stay all edges or otherwise only the shoulder seam, neckline, armseye, and placket edges. (Fig. 77.)

This procedure is most essential for it prevents stretching important outlines while handling the garment during construction. A stretched neckline, armseye, or placket is very difficult to remedy.

Suggestions to Aid in Assembling Any Garment.—If care has been taken in testing and altering the pattern, in

cutting and marking seam allowance the front and back sections can be completely assembled and basted before pinning and basting side seams.

1. **DARTS.**—Match and pin darts, with no fullness on either side. Baste from point. When stitching dart for first fitting, stitch toward point. The dart should be perfectly smooth throughout without fullness at end. If the fabric is heavy and firm, slash the fold of dart point and press a flat seam. If the dart is to look like a tuck, press the edge to one side and edge-stitch from right side. (Fig. 78.)

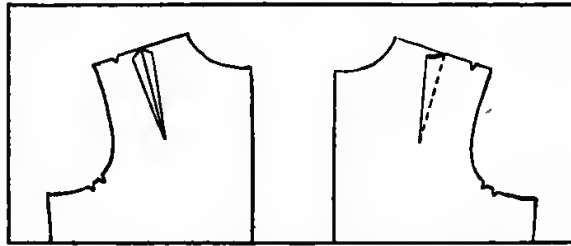


FIG. 78. Dart Stitched and Pressed Open

If there are two or more darts, they must end in a straight line at bottom. (Fig. 79.)

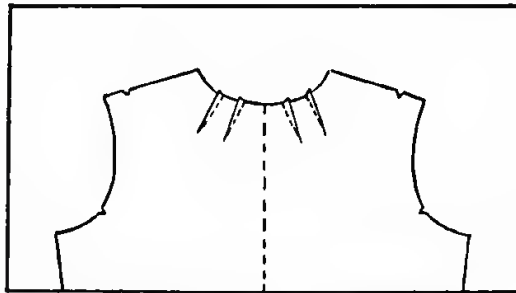


FIG. 79. Finish Darts on Straight Line

Darts must not be omitted if they are on the pattern.

2. **LENGTHWISE SEAM.**—If a lengthwise seam extends to the shoulder seam, open and press the lengthwise seam before the shoulder or crosswise seam is stitched. (Fig. 80.)

3. **TUCKS.**—All tucks should be folded accurately on perforations and stitched or finished with a running stitch.

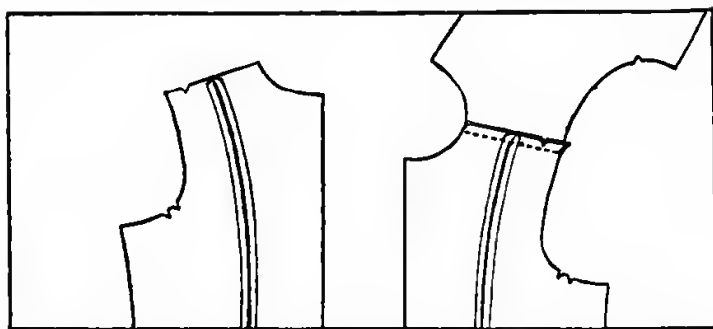


FIG. 80. Seam Pressed Open Before Joining Another Seam

4. **GATHERS, SHIRRING, SMOCKING.**—These should all be completed. If attached to a yoke, match notches, pin, baste, and stitch seam on wrong side, press closed seam with gathered edge extending upward. Baste from right side for edge-stitching.

5. **PLAITS.**—These should be pinned, basted, and pressed before setting into a garment. If there are box plaits under a yoke, finish them completely before sewing on the yoke.

6. **SKIRT YOKES.**—When there is a yoke it is edge-stitched to the blouse instead of skirt or blouse to yoke. All edge-stitching on yokes, tucks, or plaits should be completed before stitching side seams.

7. **OPENINGS ON FRONT OR BACK OF BLOUSE.**—All neck openings, facings, bindings, loops, plaits, zippers, and bound buttonholes should be completed before the dress is assembled. If the pattern has been carefully fitted (and altered where necessary), this should be possible. The front and back center length lines ought not to require any fitting or changes that will affect them. Where any fitting or alterations are required during first fitting, they are usually made at shoulders or side seams.

Suggestions for Pinning and Basting Garment.—In pinning the garment together, place the garment on the table, right sides together, notches matching, edges even, and ends coinciding. If the fabric is to be eased between notches hold the fullest part up toward you. Place all bias sections on top

of straighter sections and ease the more bias edge by patting it in place. An allowance for a placket must be made on left skirt seam. Begin pinning at the wider end. Use plenty of pins, placing them at right angles to seam line with their heads outside. While basting, the pins can be pulled out easily. (Fig. 81.)

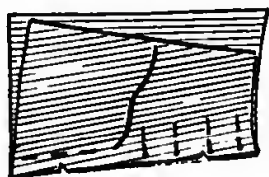


FIG. 81. Keep More Bias on Top when Basting

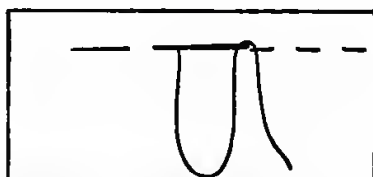


FIG. 82a. Even Basting

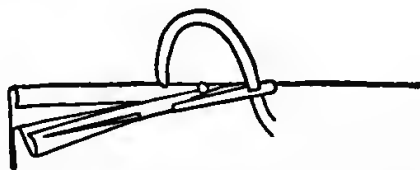


FIG. 82b. Alternate Slip-Stitching or Seam Basting

If there are yokes or divisions on the skirt, they must match at intersecting lines. Plaids and designs must match (see Chapter 5). In order to match perfectly, especially for yokes, it may be necessary to fold one section back on seam line and pin to corresponding seam on the other section. Use slip basting to attach in place. (Fig. 82b.)

SHOULDER SEAMS.—In the normal shoulder pattern line, the back is longer than the front (if no allowance has been made for darts, gathers, or tucks on front). Hold the back toward you, notches, neckline, armseye, and seam markings matching, ease the back and slightly stretch the front.

UNDERARM SEAM.—Pin the front and back together, notches, armseye, waistline, and seam markings matched. Baste from armseye down on waist or from bottom up on dress.

VARIOUS BASTINGS.—Use dressmaker bastings on all long seams where no fitting is required. Use even basting ($\frac{1}{4}$ -inch

stitch) for all sections where a close fit is necessary. (Fig. 82a.) All difficult seams such as matching designs, or seams that pucker no matter how carefully prepared, may be basted from the right side with slip basting. (Fig. 82b.)

CAUTION.—Keep the garment flat on the table while pinning and basting. Sheers or fabrics that show any tendency to stretch should be stitched with strips of thin paper underneath the seam to keep them from stretching or puckering.

Preparation of Sleeves.—Sleeves should be cut together, if possible, to insure that two will not be cut for the same arm.

Be sure that the line of basting stitches has been placed on the lengthwise grain of sleeve and a second one across the cap of sleeve. (See Fig. 73.)

There will be a slight fullness on the top of the sleeve (from $1\frac{1}{2}$ to 2 inches). This fullness will be eased in from notch to notch, and if carefully distributed there will not be any perceptible fullness at top. (Fig. 83.) In most materials this fullness can be taken out by pressing over the cushion. This fullness is necessary to prevent drawing over the arm. In thin fabrics or where there is more fullness in order to distribute the material evenly, put in two rows of gathers, the first on the seam line, and the second $\frac{1}{8}$ inch below, parallel to the first row.

TO PIN SLEEVE SEAMS.—Place the sleeve flat on the table, folded so that the top and the bottom edges coincide. Place pins at right angles to seam line. Match and pin corresponding notches. Pin from top edge to upper notches. Pin from bottom to lower notches. The fullness between notches should be placed directly at elbow where it is necessary for ease in bending elbow. This fullness may be eased in, gathered, with tucks or darts, depending upon fabric.

The sleeve must lie flat on table. If it does not, repin before basting.

Belt.—Pin and baste the belt ready for first fitting of the garment.

Fitting a Garment

Fitting is important for no garment is smart that does not fit the individual who is to wear it.

Methods of Fitting.—There are two methods of fitting in general use.

SEAMS OUTSIDE.—In trying the dress on for the first fitting, it is sometimes easier if there is no perceptible difference between the right and left sides of figure to fit the dress, with the seam on the outside. Advantages are ease of taking in, or letting out seams, and it does away with the necessity of transferring pins in marking alterations. Disadvantage—the seam line direction does not show clearly because of the interference of seam edges.

SEAMS INSIDE.—Another and more accurate method is to fit the garment with the seams on the inside. If one of the shoulders or hips is higher than the other, this is the better way of fitting, for both the right and left sides of the figure can be fitted accurately.

To Make Alterations.—In making corrections on seam lines, turn under one edge on the correct seam line, lap it over to the corresponding correct seam line, and pin securely in place. Use plenty of pins and place at right angles to seam line. Seams changed by this method will be basted from the right side. When the seam is opened, the wrong side of seam will appear as though basted in the usual way.

Another way of making corrections is to place a line of basting stitches along fold of lapped edge, with a second line of basting where lapped fold touches seam line.

In second fitting garment should have seams on the inside.

Requirements for Fitting the Garment.—The following requirements should be observed:

1. Appropriate undergarments. The garment should be fitted over smoothly fitting undergarments. Brassières, girdles, or corsets, if worn, should be adjusted correctly.

2. Posture. Easy natural position of standing. Weight on both feet. Keep face forward, body erect, but easy natural position. Arms hanging loosely at sides. Stand in front of a full-length mirror for best effects.

3. Garment on figure. Put the basted garment on right side out, adjust it on shoulders, pull it down all around. Place the belt in position around the waist to keep the garment in place while fitting. The center front, center back, underarm seam, gathers, plaits, and fullness should be adjusted for ease, or blouse at waistline and in correct position with fullness under bust in front and shoulder blades in back. Be sure that the grain lines at center front and center back are at right angles to floor with grain line at chest, and width of back parallel to floor.

4. Look the garment over carefully to see where any fitting is necessary.

Careful fitting at the shoulders, with an adjustment at back of neck, is sometimes all that is required.

Precaution: Do not overfit. The less fitting the less danger of pulling the grain out of place. All alterations should be made on the side seams, not in front or back sections.

For correction of misfits, consult Chapter 5.

The garment should not require much fitting if the pattern has been correctly altered. Suggestions for alteration of pattern (pages 116-122) will aid you in any necessary fitting.

The Grain Line.—The grain line in a well-fitted garment should extend in a straight line. The lengthwise grain should be at right angles to the floor. The crosswise grain, at chest, width of back, on the sleeve cap, and at the hip line should be parallel to floor.

The Neckline.—The well-fitted neckline curve should follow the natural curve of the neck straight across front at base of neck; it then curves up at right angles to shoulder line, and with an upward tendency as it extends around back of neck.

The neckline should be fitted well up to the bone at the back of the neck. Do not trim out the neckline at the front

until fitted. It should be slashed and turned to a becoming line on the individual.

If the neckline appears too tight or high, place a tape measure around the neck, and mark with pins or chalk at bottom of tape measure for a new neckline. Clip carefully to new neckline.

Any changes that have been made in the neckline necessitate changes in the collar. If the neckline has been made larger, the collar must be increased. This alteration can be made, usually, by stitching narrower seams at ends of collar. The collar may be reduced in size by taking off at ends. Keep the shape of collar the same in design and both ends alike. To secure a better fit, the neckline of collar should measure $\frac{1}{2}$ inch less than the neckline of dress.

Tiny darts at back of neckline may be necessary sometimes for better fitting in case the back neck happens to be thin or if necessary to bring the shoulder and armseye in better position on the figure. For figures with rounded back, tucks or darts that radiate from the back neckline take care of the extra fullness that has been necessary to give ease across the back as well as to prevent armseye seams from pulling out. Collar and neckline will also fit better. Use 3-5 darts or tucks as necessary, varying in depth from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches.

The Shoulder Line.—The length and location of the shoulder line changes with fashion. If short the sleeve cap must be extended; if long the sleeve cap can be shortened by fitting up into armseye at top over shoulder. The shoulder line should extend in a straight line from the highest point of the neck, slightly back of the ear, to the top of shoulder on armseye, or sometimes it is placed $\frac{1}{2}$ inch back of top. This line may need to be changed for the rounded shoulder or over erect figure. (See illustration in Chapter 5.)

The Armseye Curve.—The direction of this curve is very important, for a poorly shaped armseye will cause discomfort and ruin the appearance of a dress. The armseye curve should appear as a straight line from the point of the shoulder in

both back and front, touching the end of the chest or width of back line. It then curves under the arm and appears as a straight line under arm where back and front join in underarm seam. There should be a smooth, easy fit around armscye. Do not allow the armscye to curve in at chest or width of back. It will be an unattractive line, giving the front of the figure a constricted appearance and cause discomfort in both back and front.

The Underarm Seam.—This seam should fall in a straight line from the center of the underarm, and appear as a continuation of the shoulder seam, at right angles to floor. Use a weighted tape measure to test this line. It should be a plumb line.

Waistline.—To adjust the waist length, pin a tape securely around the waist, adjust the tape to the natural waistline and pull the garment down all around, adjust the center front, center back, underarm seam and any fullness between, so that all parts are at right angles to tape measure. Ease in any desired fullness and see that the tape measure is becomingly placed at waistline. Mark the lower edge of tape measure with pins or chalk placed close enough together to insure an accurate line around waist. Remove waist and correct waistline with chalk or colored basting thread.

ADJUST SKIRT AT WAISTLINE.—If too large, take in at waistline and hips, and rebaste seams taking in the same amount on seams to bottom of skirt. If too close fitting, let out darts and seams. Make seams same width to bottom of skirt. Keep skirt balanced by taking the same amount from both sides. This is one of the places where the (1 inch) increased seam allowance which was suggested above will prove extremely valuable.

HOLLOW BACK.—If the back is hollow, take deeper darts. If too full, let out darts.

PROMINENT ABDOMEN.—If abdomen is prominent, let out at front seam over hips.

Hanging the Skirt.—Hang the skirt accurately during the first fitting. If the dress is to be held close to the figure by a belt at the waistline, the belt or a tape measure must be placed in position before turning the hem. The skirt also should have the belt on. Hips must be accurately fitted and placket should have been finished.

AIDS TO HELP IN ADJUSTING LENGTH OF SKIRT.—A yardstick, ruler, notched cardboard, commercial marker, or tailor's square can be used. To locate height of skirt on any aid, pin a tape at number indicating length, or a rubber band may be wound around at the number or a piece of paper may be pasted on. The tailor's square is more accurate, for the short arm of square will rest on floor. In using any of these aids, hold it up to the figure at right angles to floor; the fitter will move around the figure being fitted, and will place pins at the desired length in a straight line around the garment; or the height from the floor may be marked with tailor's chalk. Incorrect markings should be erased immediately.

Fabrics that sag must be placed on a hanger or dress form and allowed to sag before marking for length.

CIRCULAR SKIRTS.—The circular skirt which sags at all bias points requires care in handling. It must be allowed to hang until all stretch is eliminated. Allow skirt to fall in natural folds and place pins through folds in marking. The extreme bias at center of curve is difficult to mark accurately, for it swings out of line.

PLAITS.—Plaits should be pinned or basted in place before marking. Seams at edges of inserted pieces should be matched accurately and marked together in the way they hang.

SHEER FABRICS.—Sheer fabrics require care in hanging, for unless they are made slightly longer, they float away from figure and appear shorter. Circular skirts should be hung longer because of the swing away from figure.

TURNING HEM.—After the garment has been marked for length, it is better to turn the hem on the individual, for inaccuracies can be corrected before basting the hem in place.

Place a line of basting stitches on the skirt length marks at once before the pins fall out or the chalk marks are lost.

TO MARK THE LENGTH OF DRESS FOR TURNING OF HEM ON YOURSELF.—Hold a yardstick up to the figure, and turn the body around carefully, having someone place pins in a straight line around the hips, or fasten a piece of tailor's crayon on table and rotate the figure so that a distinct mark is made around hips.

Remove the dress, measure down from the pins or marked line the required amount for turning hem, and mark at these points. This measurement will be the same around the dress, for the difference in lengths are above the hip line. Turn hem on marked points.

The Fit of the Sleeve.—Test the fit by slipping it in place. Do not pin in at first fitting. Is it correct in size and length?

TO TEST THE FIT OF THE SLEEVE.—Place the sleeve on the arm in correct position, and pin at the shoulder and underarm seam. The straight grain of the sleeve must extend from the bone at shoulder down in a straight line over upper part of arm or the sleeve will draw. The cross-grain must be straight across the upper arm on a line with the chest and width of back. The underarm seam in a one-piece sleeve should be in line with the underarm seam and rest on the center of underarm. A set-in sleeve should not appear to be gathered, and the fit at wrist should be snug. Then remove garment carefully, so as not to loosen any pins.

Alterations.—Make all alterations as called for in first fitting.

Second Fitting

To Prepare the Garment for Second Fitting.—The procedure is as follows:

1. Corrections of garment after first fitting. Mark all alterations, accurately and substantially, with a different colored thread than used in first basting.

2. Baste new seams where changes have been indicated.

3. Test the right and left sides of the garment and make corrections. To do this, make fold on center front and center back lines, then pin seam lines together. Mark the alterations on the other side of garment, unless the two sides of figure vary a great deal. (See page 160.) If the difference is slight, the two sides should be made alike for the slight differences in garment will not show when on the figure.

Sleeves.—Before putting on garment for second fitting, pin and baste the sleeve in place.

To INSERT SLEEVE.—If a new armscye has been marked, or there has been an alteration at the shoulder or underarm seam, a corresponding alteration may be necessary for the sleeve. The armscye should be stayed, and the shoulder and underarm seams should be stitched and pressed before setting the sleeve into the armscye.

1. Hold the wrong side of the garment up, with underarm seam down.

2. Place the correct sleeve for arm, right side out, in the armscye with right side of garment and sleeve facing; match underarm seams of garment and sleeve. Place pins at matched seams, at right angles with heads out.

3. Hold the garment and sleeve so that you can look into sleeve; match and pin at notches. Place pins at right angles to seam line from notch to notch. There will not be any fullness at underarm from notch to notch.

4. Pin the marked grain line of sleeve to the shoulder seam. There should not be any fullness over the top. The bias edges of the sleeve cap at each side of lengthwise basting will be eased in as the sleeve and armscye are pinned. In a plain set-in sleeve, all fullness can be worked out by careful pinning, and if correctly set in, there will not be any perceptible fullness at either back or front of sleeve. Place pins about $\frac{1}{2}$ inch apart, heads out. (Fig. 83.)

GATHERED SLEEVE.—If the sleeve is a full gathered sleeve, two rows of gathers should be put in, the first one on the seam line, the second $\frac{1}{8}$ inch below. This fullness will be distrib-

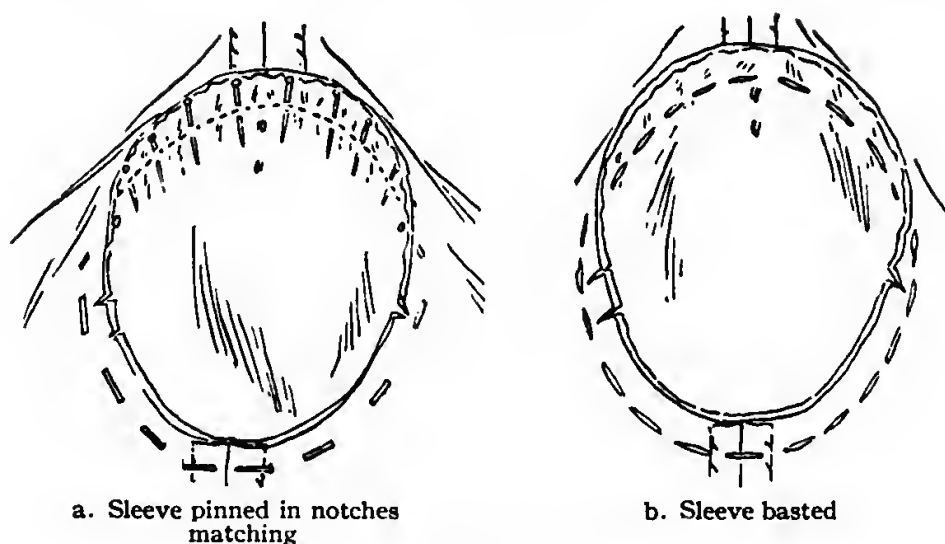


FIG. 83. Sleeves

uted from notch or in the way most becoming for the arm being fitted.

TO FIT SLEEVES.—Both sleeves should be basted in for second fitting of dress. Examine them. Do they hang with straight of grain extending from shoulder to elbow? Is there any drawing? Do the sleeves wrinkle? If so, they have been set in incorrectly and they must be repinned.

ELBOW.—When the arm is bent, the elbow should rest in the fullness allowed for it. If fullness is too high or too low, adjust the fullness. Fit the sleeve at seam as necessary.

LENGTH OF SLEEVE.—The sleeve, if a long one, should extend over the bone at wrist when the arm is in any position. If the sleeve is short, it must end either 2 inches above or 2 inches below the elbow. This length of sleeve must be adjusted to a correct length for best appearance on the individual arm.

TO STITCH SLEEVE IN ARMSCYE.—Baste and as you baste remove the pins. Stitch on the seam lines exactly. If the sleeve is stitched outside of the seam allowance it will be too large, and if stitched inside seam allowance it will be too small; so stitch accurately on fitted seam line.

TO INSERT SLEEVE IN ARMSCYE ON FIGURE.—It is sometimes necessary to pin a sleeve into the armscye when the dress is on, in order to adjust or ease the cap of sleeve over a fleshy upper arm. In this case the edges of the cap are turned on seam line and the sleeve is pinned to the corresponding seam line just as it will be finished. Place pins at right angles to folded cap about $\frac{1}{2}$ inch apart. Baste with right side basting, using either method, before removing pins. (Fig. 84.)



FIG. 84. Pinning Sleeve in Place
When Dress Is On

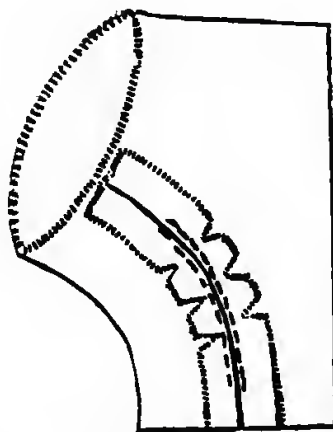


FIG. 85. Kimono Sleeve—
Edge-Stitched under Arm

TO TAKE OUT FULLNESS.—If it is necessary to take out a slight amount of fullness, this can be done by moving seam of sleeve cap inside seam allowance of armscye from notch to notch, rebaste, and stitch on new seam line. Since the sleeve pattern was made to fit the armscye of the garment, and if either the shoulder or underarm has had any fullness taken out in fitting, a similar fullness should be taken out from the sleeve so that it will fit into the armscye perfectly.

FIT AT WRIST.—Sleeves should fit perfectly at the wrist, and since this is one of the indications of a well-made garment, extra care must be taken to see that the underarm seam of sleeve is correctly placed. Examine carefully when the arms are hanging down at side. If the sleeve is a long one, the finish at wrist must be adjusted so that it covers the bone at wrist. To be certain that the sleeve is long enough, bend the elbow and hold the arms up with the fingertips touching at back of neck. A sleeve shortens as it adjusts to arm, therefore allowance should be made for this. Fold under at lower edge, following the curve at wrist. (Fig. 84.)

KIMONO SLEEVE.—In the kimono type of blouse, the sleeve and body of the garment are cut in one piece. This type is more suited to soft fabrics. In fitting, take out as much of the fold at back of armseye as possible, without drawing the garment out of shape. Seams must be pressed open, edges clipped at the deepest part of curve. The underarm may be stitched, from the right side, on both sides of the seam following outline of seam. This will strengthen the curve. (Fig. 85.)

RAGLAN SLEEVE.—This sleeve is somewhat like the kimono in effect. It is, however, cut separately from the garment. One seam is in front of, and the other seam is in back of, the normal shoulder line. It is more satisfactory in fit than the kimono sleeve, in that it does away with the bulge near

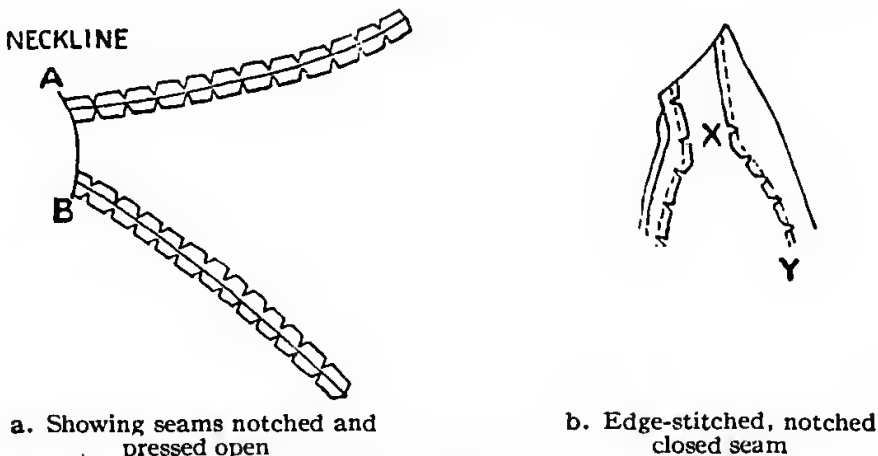


FIG. 86. Raglan Sleeve

the armseye. It is easier to fit and is less apt to tear out under the arm. Seams must be clipped at curve. (Fig. 86.)

THE EPAULETTE SLEEVE.—This sleeve follows the outline of the armseye until near shoulder, where it extends to the neckline with the effect of a yoke. The shape of the yoke or shoulder strip should be a becoming width for shoulder. The curve must be notched and especial care must be given to finish at corner. Clip diagonally at corner, and when stitching care must be taken to prevent a rounded corner or puckers.

Check During Second Fitting.—The following should be checked in second fitting:

1. Neckline. The neckline should be checked for correctness of curve, snugness of fit, fit of collar, general appearance, and becomingness.

2. Sleeves. The set of the sleeve should be checked with both sleeves in position, pinned and basted. Check shoulder seam in relation to sleeve, smoothness around the armseye, top of sleeve cap, placing of fullness, and hang of sleeve with correct placing of grain line and lengthwise seam; then determine sleeve length and fit at wrist or, if short sleeve, at bottom of sleeve.

3. Check all alterations made, or necessary, on crosswise seams at waistline, and divisions on waist or skirt such as yokes, inserted plaits, or godets.

4. Mark placing of belt for permanent placing.

5. Check hang of skirt for permanent finishing.

6. Determine location and mark placing of trimming, buttons, and pockets.

Size of Stitch.—The size of stitch, thread and tension should be adjusted to the fabric. A seam should be practically invisible. A seam that puckers should be ripped, for no amount of pressing will correct it. Adjust the tension, keeping it loose and the stitch not too fine.

Needles and Thread.—For basting use number 7 or 8 needles. For fine finishing use number 9 or 10. Use number

60 or 70 cotton thread for basting on cotton, linen, and woolen fabrics. Use spools of silk that are no longer of use for basting silks and fabrics that mar readily.

Construction of Seams Appropriate for Silk Fabric

Preparation of Seams.—Mark the seam allowance accurately; adjust the width and length of the seam accurately by pinning at frequent intervals along the seam line. If one edge is more bias than the other, the fabric will slip and draw more on one side than the other, causing the seam to ripple or pucker. This will, of course, ruin the appearance of the garment. Silk is not as elastic as wool, therefore imperfections in the seam cannot be pressed out. Seams that ripple will need to be repinned, rebasted, and stitched again. To avoid these difficulties, keep the fabric flat on the table with seams in position; place pins at right angles to seam line, close together; baste, keeping fabric flat on table.

MACHINE ADJUSTMENT.—Adjust tension to the weight and texture of fabric and use the right kind and number of thread for the fabric. The length of stitch should correspond to the fine yarn used in weaving silk.

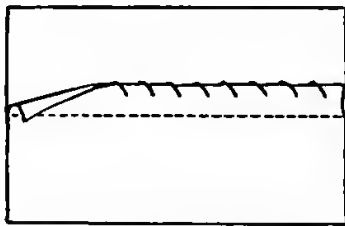
TO STITCH SEAM.—When stitching seams, do not allow the fabric to fall over the edge of machine, for it is liable to draw the seam as it passes under the presser foot. Keep the weight of the fabric resting on top of machine.

Do not pull fabric from back or push it from front, but guide it so that the seam will pass easily under the presser foot. If there is any slipping, drawing of fabric, or difficulty of the feed passing the fabric under the presser foot, use a thin paper and stitch through both paper and fabric. Make trial seams to test the machine before stitching seams on garment.

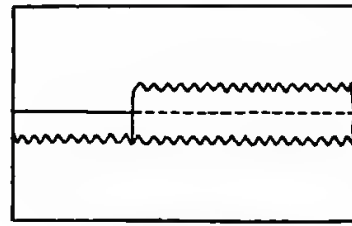
Seams for Silk Garments.—Plain seams are generally used on silk fabrics, using the method of finishing appropriate for the type of fabric.

1. **OVERCAST EDGES.**—Trimming and overcasting the raveled edges may be done either by pressing the seams open and overcasting each edge separately, or by turning both to one side and overcasting together. (Fig. 87a.)

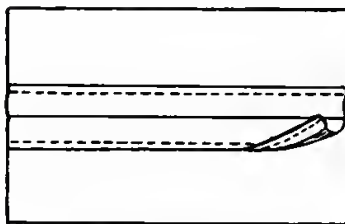
2. **PINKED EDGES.**—On fabrics that are firm or where there is little tendency to fray, the edges may be pinked with pinking sheers. (Fig. 87b.)



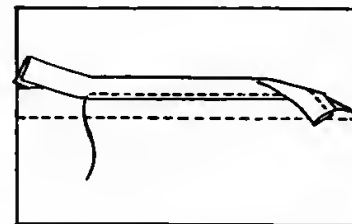
a. Overcast seam



b. Pinked seam



c. Turned back seam



d. Bound seam

FIG. 87. Plain Seams

3. **TURNED BACK EDGES.**—The edges in this finish are folded back on themselves a scant $\frac{1}{8}$ inch and either stitched by machine near the folded edge, or run by hand for a softer finish. (Fig. 87c.)

4. **BINDING APPLIED.**—Edges may be finished by binding with taffeta seam binding or bias binding, either separately or together. Seams that show (on pockets or boleros) or seams for fabrics that fray excessively may be finished by binding. (Fig. 87d.)

For other seams and finishes refer to Chapters 12 and 13, or *Attractive Clothes*, pages 235-240.

Hem Finishes

Hems.—A hem is a fold, and it may be used as a finish or as a decoration on a garment. Hems may be straight or

curved. Curved hems must be narrow, but straight hems may be any width, the only requirement being good proportion for the placing. The first fold of a hem depends upon the width of the hem and the firmness of the fabric. For a narrow hem it may be $\frac{1}{8}$ inch or less, if fabric does not fray; for a wide hem it should be $\frac{1}{4}$ inch. A very narrow hem $\frac{1}{8}$ inch or less need not be measured or basted, but for wider hems a gauge should be used. For woolen or wiry fabrics, rayon or sheer fabrics, the first fold should be pressed and basted to keep it firm and straight.

TO MAKE A GAUGE.—In any measuring where accuracy is required, a gauge should be used. One can be made from a narrow strip of cardboard with a notch cut in it indicating the width to be measured. *Illustration:* Let *A-B* equal the width of hem—cut a notch at this point. To use the gauge for a hem, turn a fold on the fabric and then, with the gauge as a marker, fold and pin at regular intervals. Baste close to edge and finish by hemming, machine stitching, slip-stitching, or blind hemming. (Fig. 88.)

ADJUSTING FULLNESS.—There will be some fullness at the edge of turned hems unless the fabric is perfectly straight. If there is fullness, it may be regulated: (1) by gathers if the material is thin and the fabric cannot be steamed, (2) on heavy fabrics, by darts placed at right angles to the raveled edge of hem and turned all in one direction (toward the left) for ease in stitching and pressing. On wool or fabrics that can be steamed, the fullness should be removed by steaming and pressing. The raveled edges may be finished in various ways depending upon fabric.

Finishes for Skirt Edges.—Turn a hem to wrong side at corrected marked length. It should then be basted $\frac{1}{4}$ inch above edge fold at bottom of skirt. In basting the hem in place, the garment should rest flat on the table with the wrong side up and the fold toward you. When hemming, the fold of hem must be toward you for correct hemming. All seams not pressed open must be clipped at hem line and pressed open

so that they will be flat inside the hem. Use a gauge for measuring hems.

To Shrink Out Fullness.—If there is excessive fullness at top of hem, shrink it out before finishing. Wool will lose its fullness more readily than other fabrics.

To shrink out fullness, place the garment on the ironing board wrong side up, and press out the fullness from fold to top of hem. Most fabrics require moisture, and if it is necessary use as directed under pressing (page 207). After the fullness is pressed out, find the narrowest part of the hem. Make a gauge to fit this point and mark width of hem (not to exceed 3 inches) around garment. The edge of hem may be finished in various ways depending upon fabric.

Methods of Finishing Hems.—Hems on skirts and dresses, except cotton work or house dresses, should be hemmed by hand.

ON MEDIUM-WEIGHT FABRICS.—Turn under free edge of hem and stitch $\frac{1}{8}$ inch or less from fold, or in sheer fabrics use running stitch. Press fold, but be careful not to press it against garment. Baste and slip-stitch in place on garment with as few stitches as necessary to hold hem firmly in place. Keep the stitches from drawing and also make them as inconspicuous as possible. (Fig. 89.)

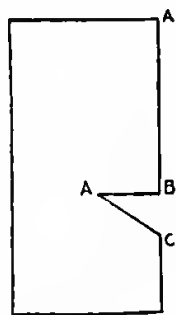


FIG. 88. Gauge

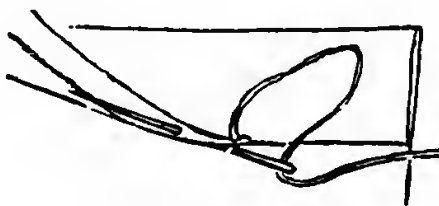


FIG. 89. Slip-Stitching

FOR HEAVY FABRICS.—After the width of hem is marked, place taffeta binding on free edge of hem. It should extend over the raveled edge far enough to hold firmly when the edge

of binding is stitched close to its edge. Press, baste, and blind-hem the free edge of binding in place on skirt. Use a good quality of silk seam binding. This finish is especially adapted to hems where the fullness has been removed by steaming and pressing. It gives a soft and inconspicuous finish. (Fig. 90.)

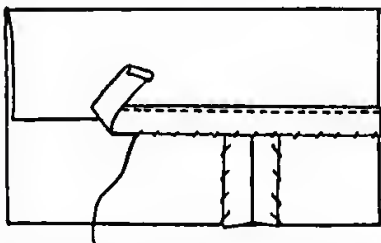


FIG. 90. Hem with Seam Binding Stitched Flat on Edge

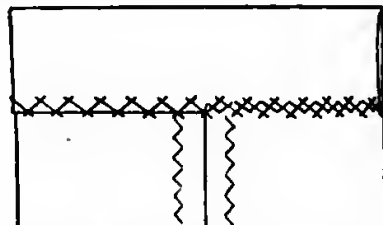


FIG. 91. Plain or Pinked Hem (Single Fold), Catch-Stitched in Place

TAFFETA SEAM BINDING.—Taffeta seam binding may be pressed to fit a curve. By dampening and pressing, the binding may be made to follow any desired outline.

PINKING.—For thick or heavy fabrics, such as velvet, broadcloth, or fabrics which do not fray, the edge of hem may be pinked, then basted and catch-stitched in place on garment. (Fig. 91.)

BINDING.—The edge may be bound with bias tape by enclosing the raveled edge of hem. Slip-stitch or blind-hem fold of tape to garment. Bias tape may be placed flat on edge of hem, stitched by machine on edge, and the free edge of tape may be hemmed, slip-stitched or blind-hemmed to garment. Used on linen and heavy cotton hems. (Fig. 92.)

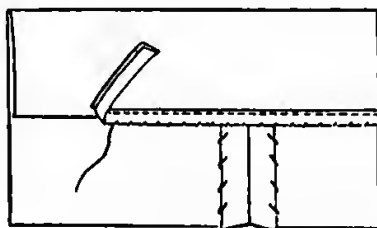


FIG. 92. Seam Binding or Bias Tape Folded, Stitched on Edge, and Hemmed or Slip-Stitched to Skirt

ROLLED HEMS.—These may be used on fine cottons, linens, silks, and sheers for dainty soft finish on any part of a gar-

seam on edge. Turn binding to wrong side, keeping folds straight on sides. Turn under free edge of binding and stitch near folded edge free from garment. Stitch flaps to binding on wrong side. When pressed, the collar will hold in place; if not, slip-stitch with long stitch. Do not stitch by machine. (Fig. 93.)

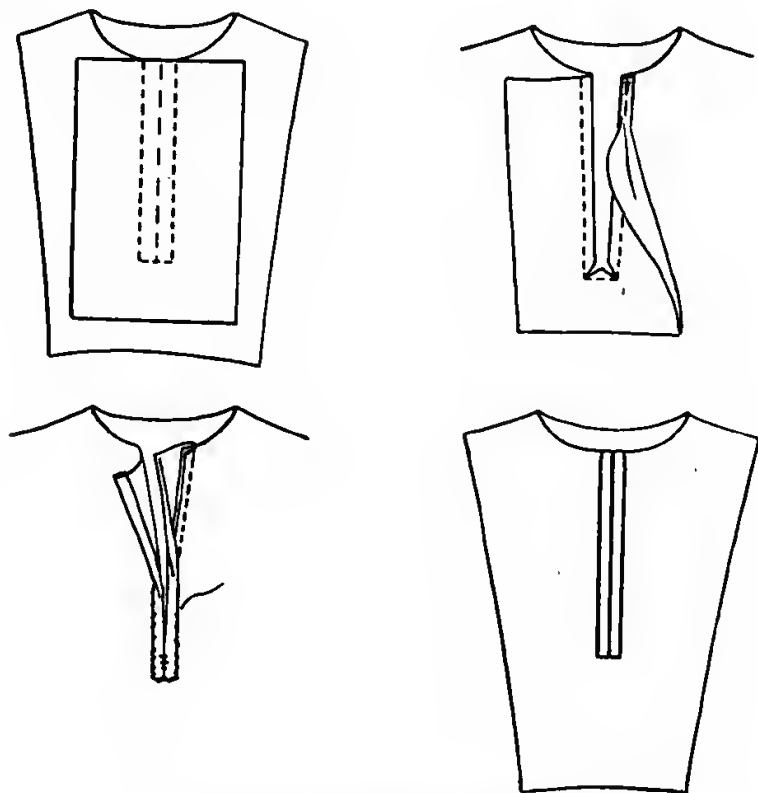
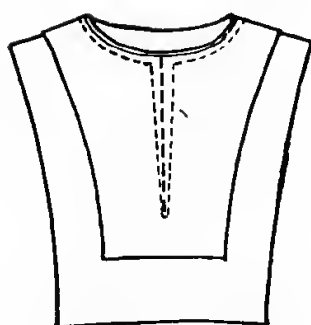


FIG. 93. Bound Buttonhole Closing

SHAPED FACING USED WITH A CONVERTIBLE COLLAR.—Cut the facing like the front of blouse, with the outside edge extending from a point about 2 inches from tip of shoulder, sloping gradually to a point about 9 inches below high point of shoulder. The width at bottom of facing should be about 3-3½ inches, and it should be about 1½ inches below end of opening.

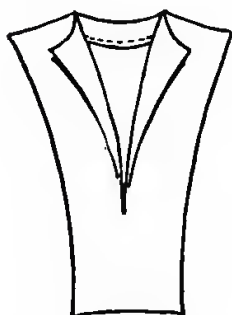
This facing is basted, stitched, cut as in Fig. 94a, and turned to wrong side with seam on edge. Finish on wrong side as in Fig. 94a.



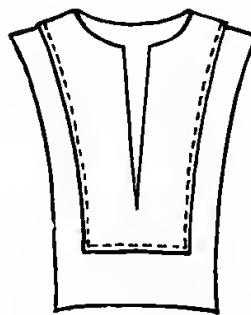
Facing basted in place



Opening cut



Right side



Finish on wrong side

FIG. 94a. Shaped Facing Used with Convertible Collar

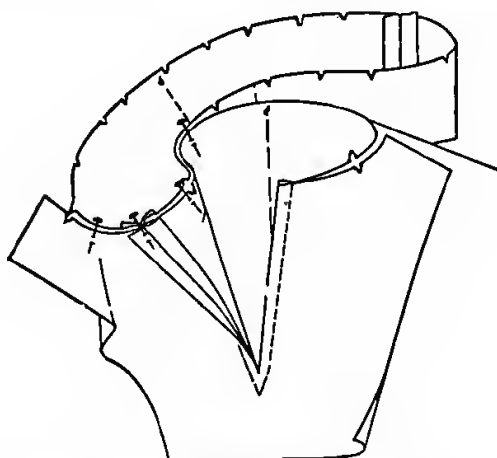
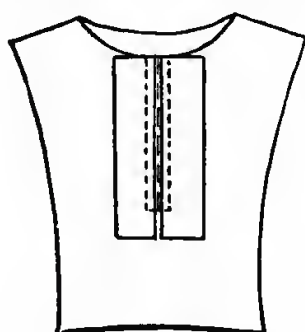


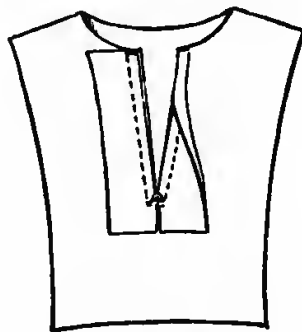
FIG. 94b. Attaching Straight Double Collar—Convertible Collar

TO BIND THE NECK SLASH WITH TWO LENGTHWISE STRIPS. —Place a basting thread on the center front or center back line of garment marking the desired length of opening. Cut the binding pieces $1\frac{1}{2}$ inches to 2 inches wide and $1\frac{1}{2}$ inches

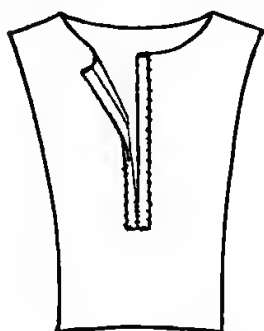
longer than opening is to be. Place the long edge of binding pieces one on each side of basting, with raw edges of binding touching basting thread. Baste and stitch $\frac{1}{4}$ inch or less, following basting line. At bottom of basting, stitch at right angles to side basting, turning square corners. Cut on basting line to $\frac{1}{4}$ inch of bottom, then clip diagonally to corners. Do not cut the threads of stitching. Turn the facing to the wrong side, crease the binding over the edge of the seam, and turn under free edge of bindings and hem to row of stitching. At the bottom turn triangles, or flaps, to wrong side with seam on edge. From wrong side stitch flap and binding together. Attach the folds of binding together on wrong side below opening with alternate slip-stitching. (Fig. 95.)



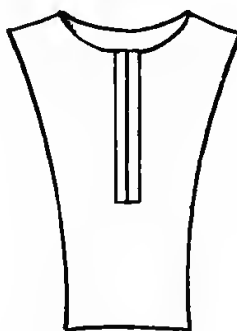
Two lengthwise strips
basted in place



Turn facing to
wrong side



Wrong side



Right side

FIG. 95. Two-Piece Facing

Collar and Neckline—Neckline Finish.—One of the most important points in the construction of any garment is the effect of the shape and finish at the neckline of a dress. While

the fit and general style of the dress is important, the workmanlike finish around the neckline will stamp the garment with the characteristic qualities of an amateur or professional worker. The way a neckline is finished is governed by the style features in vogue, the type of dress, and the shape of the neckline. The finish at neckline and wrist should always be harmonious. If the neckline is collarless, the finish at wrist should be without a cuff. A bound or faced neckline should have a bound or faced wristline to correspond.

Classification of Collars.—Collars are grouped and named, according to the fit around the neck, as standing, roll (high, medium, or low), flat, or rolling; or, according to the shape and style line, as round, pointed, cowl, bertha, bateau, or Peter Pan; or, by the way the collar is attached to the neckline, as convertible or non-convertible.

Each type of collar has its best method of finish as well as method of attaching at neckline. Collars for blouses and dresses are generally more satisfactory when made double, consisting of outer collar and facing.

Lined Collar.—All collar facings should be cut on the same thread of fabric as the outer collar, usually lengthwise, never bias, excepting for bateau or tuxedo collar. If necessary to piece the facing, join the piecings on a straight thread of fabric, and open and press all seams. Correct edges of outer collar and facing before basting and stitching. The roll collar is generally $\frac{1}{2}$ inch shorter than neckline of dress. Very often you will find the pattern for the facing smaller than the outer collar.

To MAKE COLLAR.—Place right sides of fabric together, keep flat on table while pinning. Both outer edges are held together when pinning and basting, the shorter edge on longer edge. Match center back lines and pin at right angles to seam lines, easing in the fullness caused by the difference in size. There should not be any perceptible fullness on edge. Stitch seams. If collar is curved, trim seam to $\frac{1}{4}$ inch in width, and notch at intervals close together if there is a very round

curve (concave curve). If curve is slight, the notches may be further apart. (Fig. 96b.)

If the collar has an upward curve (convex curve), slash at intervals so that the edges will not draw when collar is turned. (Fig. 96a.) If the collar has pointed or square ends, clip at corners as shown in Fig. 96b.

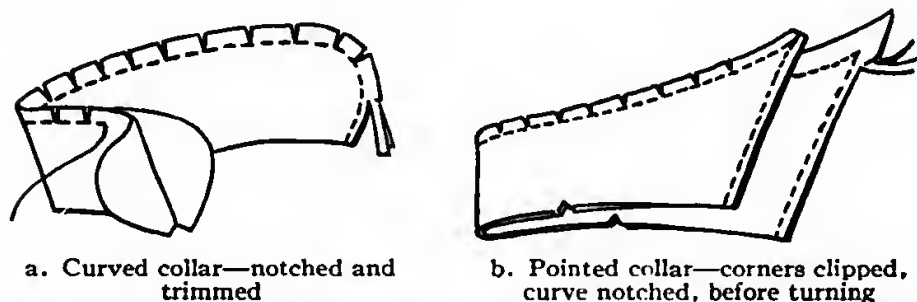


FIG. 96. Collars with Facing Applied

After stitching, clipping, and notching seams, place the edge of the collar seam before turning on the edge of the sleeve board and press seam open. This will give a sharp distinct edge to collar after it is turned and pressed. This pressing is important for all lined collars, but especially so for tailored collars, or those made of heavy fabrics.

The collar may then be turned, basted around edge on right side, and pressed again. It may be edge-stitched, if tailored, or if other parts of garment are edge-stitched. The inner edge or neckline of collar should be alike on both outer collar and facing. In sheer fabrics the outer collar and facing are cut on the same thread, and they should be alike in size.

To Attach Collar.—A collar may be attached to the neckline of a garment as a binding (standing collar, page 182) or with a bias facing. Shaped collars should always be attached with a bias facing. When a collar is stitched on with a facing, it will fit more smoothly than if applied as a binding. If the collar does not extend around the entire neckline, as in those blouses with a tailored extension and facing, the facing may extend to the edge of the facing and extension, thus finishing the entire neckline neatly and smoothly.

To Apply a Straight Double Collar.—This collar is generally put on as a binding, and if the front opening has been finished by a facing, the collar and facing will turn back forming a revers. This is known as a convertible collar.

To MAKE COLLAR.—Place the under side or facing of the collar to the right side of the garment with the basted lines on center back and collar matching, pin together leaving the front facing free. Match the seams at the end of the collar with the seams along the center front slash. Place pins at right angles, baste. Pin the upper part of the collar to the facing, with the right sides together. This will make one continuous seam from the shoulder seam of the facing around the entire neckline of the garment to the shoulder seam of the facing on the other side, leaving a space of collar between shoulder seams to be turned under and hemmed to neckline stitching. (See Fig. 94b.)

Non-convertible Collar to be Applied as a Band.—If the slash is not faced, the outer collar may be pinned to the right side of garment, center lines of back and collar matching. Pin seams at ends of collar to edge of finished slash. Pin, baste, and stitch around neckline, holding neckline up while stitching. Turn under free edge of collar and hem it over the machine stitching at neckline. This method is best for standing collar or it may be used when tie is attached as part of collar.

For Collar with Curved Neckline.—Both single and double collars should be attached to neckline with a bias facing. Begin at center back; pin center lines of double collar, or center line of single collar, so that they coincide with center back of garment. Ends of collar are located at center front line of garment. Cut a true bias strip of fabric from $1\frac{1}{8}$ to $1\frac{3}{8}$ inches in width, depending upon fraying of fabric. If necessary to piece bias strip, join on thread of bias, press seams open. Turn under end of bias $\frac{1}{4}$ to $\frac{3}{8}$ inch to wrong side. Then, place folded end of bias on end of opening or center front of garment, right sides together, and baste with bias edge even with neck edge of collar. Turn over a fold

at end opposite starting end. Stitch. Remove basting and turn the seam and facing over onto the garment, seam on edge. Smooth facing in place, turn under $\frac{1}{4}$ to $\frac{3}{8}$ of an inch on free edge of bias facing, and baste fold to garment. Stretch slightly so that the bias fold will be flat and fit curve around neckline. Hem or slip-stitch, but do not allow stitches to catch through to collar. (Fig. 97.)

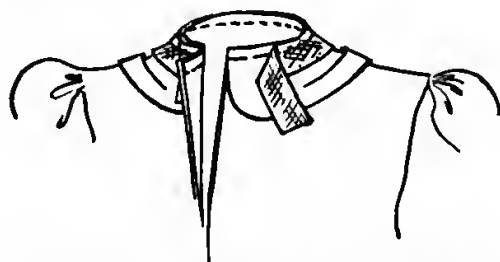


FIG. 97. Collar Applied with Bias Facing

Edge Finishes for Single Fabric Collars.—Edges of single collars may be finished with a rolled hem. This may be hemmed, whipped, or overcast forward and backward. (Fig. 192). The edge may also be bound, finished with a

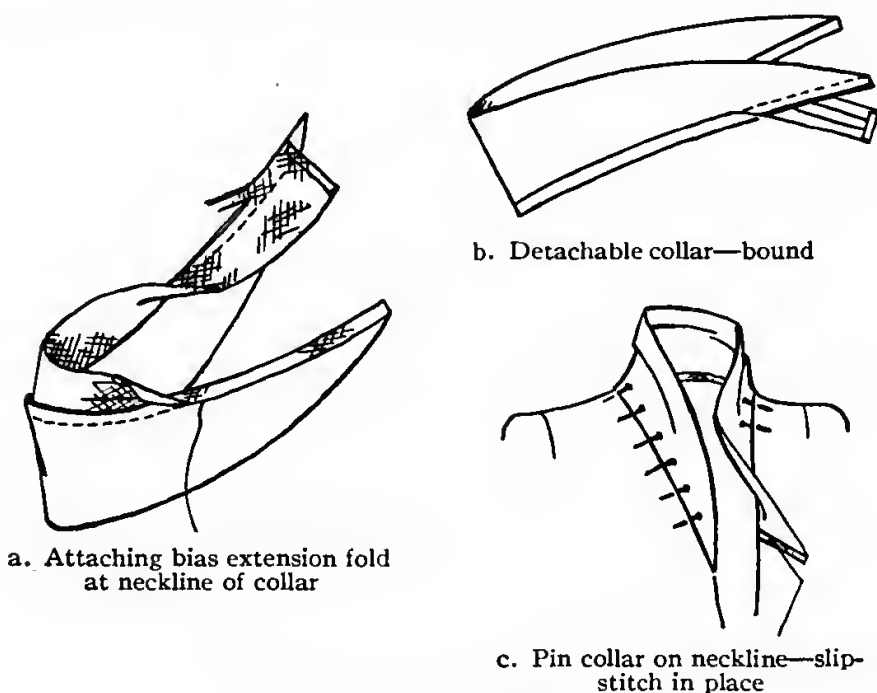


FIG. 98. Detachable Collar

dainty facing, or picoted. Lace may be applied plain or gathered. Decorative stitches may be applied to edge.

For Detachable Collar.—If the dress is to be finished with a white or light-colored collar, it is advisable to finish the neckline completely without a collar by applying a shaped or bias facing, and then make a detachable collar. This type of collar can be kept immaculate at all times. The collar will be completed just as any double collar, but it will not be attached to the dress. A bias extension fold will be placed on neckline of collar. This can be basted in dress, or matching snap fasteners can be placed on neckline of dress and collar for attaching. (Fig. 98.)

Tailored Collars Applied with a Band.—For tailored shirt waists, the collar is set in a collar band. The band fits the neck curve and is usually 1 inch in height. The collar is set in on top of band. It fits the neck snugly. Make the collar as you would any double collar. Stitch the ends of the

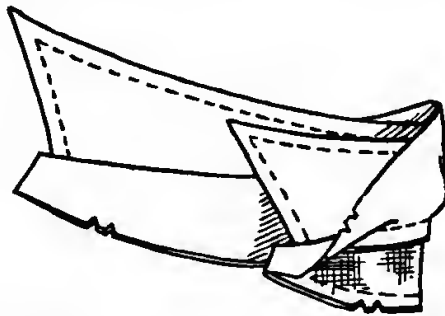


FIG. 99. Tailored Collar Set in Neckband for Seaming into Neckline

band, leaving top and bottom open. Attach the band to the neckline as a binding. Turn in both top edges of band, and insert the neck edges of the double collar into top edge of band. Baste and stitch along top edge of folded band. (Fig. 99.)

Finishes for Sleeves

Sleeves without Cuffs.—The plain sleeve without a cuff may be either fitted or loose. The bottom may be finished

with a plain hem, a rolled hem, bias binding, a shaped facing, or a bias facing depending upon style, individual choice, and type of fabric.

WRIST FINISHES.—In order to fit a wrist close enough to give a smart appearance, an opening must be provided either at a seam, at a dart which is placed on a line with the little finger, or at an inconspicuous place on sleeve.

A HEMMED OPENING.—To hem at wrist and placket opening, clip seam allowance $2\frac{1}{2}$ to 3 inches above wrist, reinforce at top of opening by overcasting at cut point, and make a bar tack to avoid tendency to fray or tear. Turn under seam allowance for a hem, baste, and hem. Fold a hem at wrist and miter at corners. Use 00 snap fasteners to close opening.

FACING SLEEVE OPENING.—This facing is applied like the one-piece shaped facing for neck (page 178). Cut a piece of fabric $2\frac{1}{4}$ inches by 4 inches. Fold in center lengthwise. Measure $\frac{1}{2}$ inch at one end, fold over from other end to this point, cut off. This will shape the facing narrower at one end. Turn under $\frac{1}{4}$ inch on sides and narrow end of facing. Stitch close to folded edge.

Place a basting thread where opening is to be placed $2\frac{1}{2}$ inches long. Place center of facing exactly on basting, right sides facing, baste and stitch $\frac{1}{4}$ inch from basting tapering to a point at end of placket opening on both sides. Slash along basting line to end of placket, but be careful not to cut stitches. Turn facing to wrong side, baste around opening, letting the sleeve extend a little outside of facing, to prevent facing from showing. Blind-hem or slip-stitch facing in place.

FITTED FACING.—A narrow fitted facing may be applied around entire wrist. Cut the facing on same grain as sleeve, by using lower part of sleeve pattern. Allow for 1 to $1\frac{1}{8}$ inch finish. Stitch facing to bottom and around slash of sleeve. Clip corner, press seams open for sharp edge, and turn to wrong side. Turn under free edge of facing, clip at corners diagonally, stitch around fold, free from garment, baste, and slip-stitch to garment so that no stitches will show

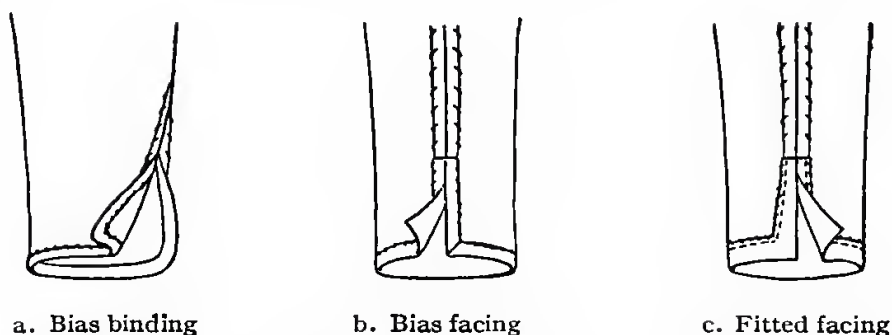
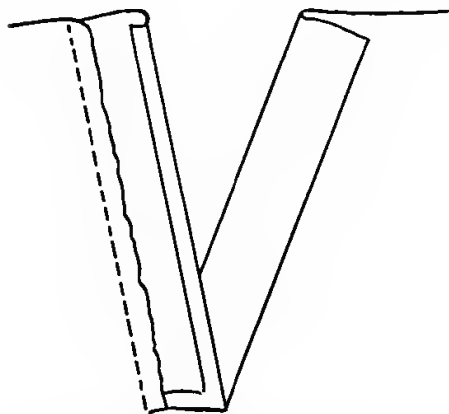
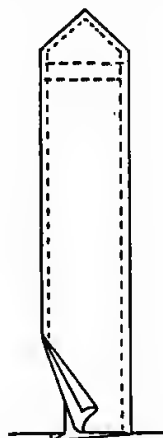


FIG. 100. Finishes at Wrist

on right side. The facing must extend same distance above opening as width of facing on other parts. (Fig. 100.)

BIAS FACING.—This facing may be applied and finished like a fitted facing by mitering the facing at corners. It will not fit as smoothly as the fitted facing.

One-Piece Tailored Opening.—Cut the opening the desired length on a straight thread of the fabric. For binding cut a lengthwise strip of fabric twice the length of the opening plus 1 inch, and 1 inch in width. Pin the binding in place with the right side of binding to wrong side of the opening of garment. Baste the binding and garment together around the opening (as in a continuous bound placket), and as the basting nears the front of the opening, slip the binding forward from edge of garment, and taper seam to a point as it

FIG. 101a. Underlap and Overlap—
One-Piece Tailored OpeningFIG. 101b. Shaped Piece for
One-Piece Placket

goes around the point of opening. Stitch the seam around opening. Remove the basting, open, and press seam. Turn the binding to the right side of garment, seam on edge of opening, baste around opening, and press. Turn under $\frac{1}{4}$ inch around free edge of opening, baste $\frac{1}{2}$ of the binding flat on garment, stitch this to top of opening. This forms the underlap. Let the other half of binding rest on underlap. It is in place for applying the shaped piece. Cut a piece of fabric 2 inches longer than opening and $1\frac{1}{2}$ inches wide. Fold at one end (Fig. 101b), and cut point. Clip at point and corners. Turn under $\frac{1}{8}$ inch on two sides and around point. Pin and baste on binding letting point extend above binding at least 1 inch. Edge-stitch as in Fig. 101b. The placket may be fastened with small buttons and buttonholes.

Two-Piece Tailored Placket.—Cut the opening on a thread of fabric 4 inches long. Finish the underlap with a binding $\frac{1}{2}$ inch wide finished. For the overlap, cut a strip of fabric 2 inches longer than slash and twice the desired width of overlap, plus two seam allowances. If the finished placket is to be $\frac{3}{4}$ inch, a 2-inch allowance is sufficient. Crease strip lengthwise through the center, and turn under seam allowance on lengthwise edges. Cut as in Fig. 101c, leaving 1 inch allowance above point of slash. Turn under edge

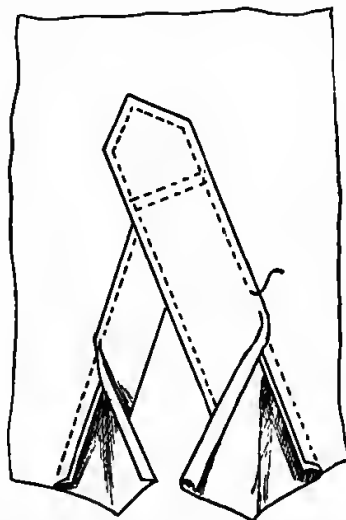


FIG. 101c. Two-Piece Tailored Placket

around point. Place the placket strip in place, pin, and baste flat to the garment. Edge-stitch as in Fig. 101c.

If using this placket opening on the front of a dress, plan the width in good proportion to bust and length of waist.

For hemmed openings, see Fig. 181.

For bound openings, consult page 176.

For piped openings, consult Chapter 13.

Cuffs.—Cuffs may be applied to loose or close-fitted sleeves. The types of cuffs are open or closed bands, single cuffs, straight or curved, and double or lined cuffs. In all cases the cuffs are finished before they are sewed to the sleeve, but not attached until the sleeve is sewed in and the slashed opening is finished. The simplest cuff to apply is the straight band, open or closed. The closed band without a slash must be large enough for the hand to slip in easily.

TO APPLY STRAIGHT BAND CUFF.—Gather the bottom of sleeve. Join the ends of band and notches. Press seam open before attaching the band to the sleeve. Attach to sleeve, right side of band to right side of garment, notches matching, seam of band to seam of garment, baste, and stitch. Turn under free edge of band and hem on wrong side to stitching.

OPEN BAND CUFF.—Cut lengthwise of material. Fold the cuff lengthwise through the middle, right sides together. Stitch around three edges; if not, cut lengthwise on fold. Clip the corners. Turn to the right side, baste, and press so that seam comes on edge. To attach, follow directions for closed band, excepting that ends of cuff must coincide with the placket opening allowing for overlap and underlap. For a band cuff with an extension, the band is closed by a bound buttonhole and button.

OTHER TYPES.—For an unlined cuff, follow directions for attaching an unlined collar.

A lined or double cuff which turns back is applied the same way as a lined collar with a bias facing.

A removable cuff is finished the same as a removable collar.

A loose sleeve may be cut 3 inches longer, faced with a shaped facing, and turned back to form a cuff. Open and press seams before turning cuff.

A cuff which falls over the hand may be attached like a straight band cuff. Any straight cuff may be attached like a band. Curved cuffs are more satisfactory when attached with a bias strip.

Belts

Fabric Belt.—Belts should always be cut on a lengthwise thread of the fabric. If cut on a crosswise grain, the belt will twist and pucker in stitching and stretch out of shape in wearing. Piece the belt, rather than cut it across the fabric. The length of belt depends upon waistline measurement and the way it is to be fastened. If it is to have an end extending outside, this should be finished either by a point or rounded shape. If a buckle is attached, the belt should be pinned over one section of buckle, the end folded under and securely sewed. It can then be measured for attaching the other section of buckle. If the belt is to be fastened with a bound buttonhole and button, bind the buttonhole before making the belt. Plan for seam allowance in locating the placing of buttonhole. (Fig. 102.)

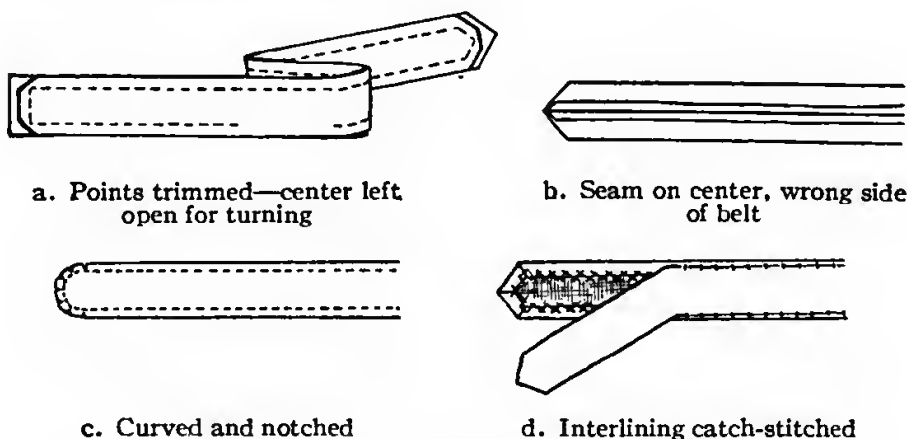


FIG. 102. Straight Fabric Belt

The width of the belt depends upon fashion, but it must be a width that is becoming to the individual.

To Make the Belt.—Pin the belt while flat on the table, matching threads, baste, and stitch, leaving 3 inches open on one long edge for turning of belt. Trim seam to $\frac{1}{4}$ inch, clip corners close to stitching, and avoid bulky corners. Notch any curves. Open and press seams for sharp edges (page 181), before turning belt to right side. Pull out any points of the belt, being careful not to pull threads of fabric. Press the belt with seams just off edge on wrong side or lengthwise in center. This must be decided before stitching ends.

Attaching Belt to Dress.—Belts present a neater appearance, stay in place better, and are always ready when needed if they are attached in some way. A belt may be attached at the back and underarm seams by French tacks (Fig. 240). These are made of coarse, matching threads or twist.

Belts may be attached by means of loops of self fabric, matching twist, or embroidery silk placed at the side seams. The loops may be made of lengthwise narrow strips of the fabric, or they may be made of chain stitches, or crocheted. To make the chain stitch: (1) fasten the thread at seam at marked placing of belt, (2) bring the thread to right side, (3) make a loop of thread by putting the needle down in the same hole with emerging thread, (4) bring needle up in loop and let this stitch rest on fabric, (5) make another loop, (6) put needle in loop, but not in fabric, and bring up in loop. Continue this way until correct length for holding belt, then fasten in fabric.

Plackets and Fasteners

Plackets.—In order to be sure that a garment or any part of a garment will fit as snugly as required, an opening is necessary for ease in putting on and taking off the garment. This finished opening is known as a placket. Plackets are lapped from right to left. The upper or right side of opening is called the overlap (a facing), and the left side finish forms an extension (binding) or underlap on which the right side fits.

REQUISITES OF A PLACKET.—Plackets must be inconspicuous, and they require great care in handling to prevent stretching the edge of the opening. Bulges on a placket indicate careless work.

Plackets must be long enough to slip over the head readily. They must be adapted to the fabric as well as the position or place on a garment.

Hooks and eyes, or snap fasteners, should be located correctly and spaced close enough to prevent gaping and turning at edge of overlap.

TYPES OF PLACKETS.—There are two types of plackets:

1. Hemmed plackets. Suitable for baby dresses, gathered skirts of sheer fabrics, sleeve openings. Consult Chapter 12.
2. Bound or continuous plackets. Set in a seam or to finish a slash suitable for undergarments or medium-weight dresses at waistline, neckline, or sleeves.

To Make Bound Plackets in a Slash.—Cut the opening the desired length along a thread of the fabric. For binding, cut a lengthwise strip of the fabric twice the length of opening, plus 1 inch and twice the width of finished placket width, plus two seam allowances. If the placket is to be applied by machine, place the right side of the binding piece on the wrong side of garment. If it is to be finished by hand, place the right side of the binding on the right side of the garment. Lay the binding strip along the edge of the opening, edges of strip and garment together, pin, and baste in a narrow seam. When measuring the end of slash, pin the binding so that it extends a little beyond the slash in garment. This will allow a straight seam on garment side, will prevent puckers, and will reinforce the opening at end of slash. When near the end of slash, baste the seam so that it tapers almost to a point. The binding with a wider seam at this point keeps the seam from tearing out. Trim the free edge of the binding under and hem on the stitching line, or edge-stitch on the right side. (Fig. 103.)

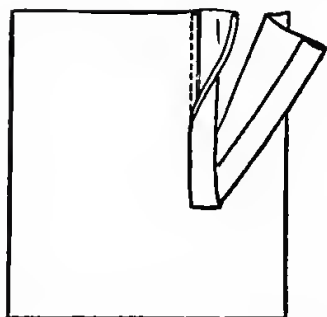


FIG. 103. Continuous Bound Placket Set in a Slash

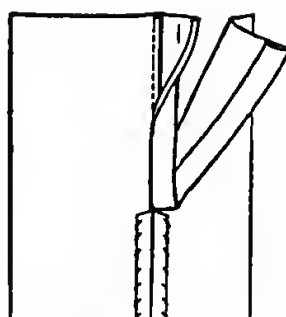
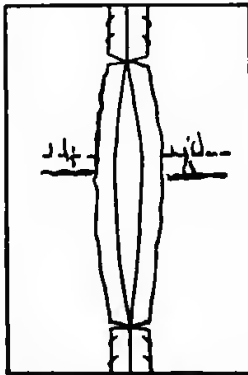


FIG. 104. Continuous Placket in a Seam

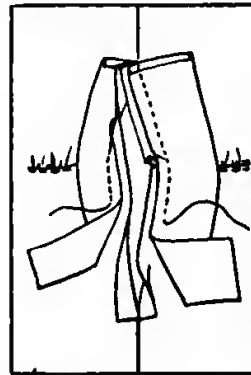
To Apply Placket in a Seam.—Finish the seam and mark for placing of binding by a line of bastings extending on both sides of opening from end of seam stitching. This will aid in placing the binding. The width of seam is the same around the entire length of placket. Do not taper when placket meets seam. Baste and stitch the binding in place just outside the line of basting indicating placing of placket. This will locate the seam of placket two or three threads back on wrong side of opening and prevent placket from showing. Slash the edges of skirt seam almost to seam stitching. Overcast or blanket stitch to prevent fraying. Turn under free edge of binding, baste, and hem the folded edge to the line of stitching. The binding on right edge of opening is pressed back flat to the wrong side of garment and the left side forms an extension. (Fig. 104.)

Placket for Side Opening of Dress.—When a dress fits closely around the waist, it will be necessary to leave an opening on underarm seam at the waistline to allow the dress to slip over the shoulders and fall in place on the waistline. The length of opening depends upon the closeness of fit at waistline and also on the width of shoulders. It is usually $2\frac{1}{2}$ to 4 inches above waistline and 4 to 7 inches below waistline. Seam the waist and skirt leaving the required opening. Join the waist and skirt. Put a line of basting stitches directly on seam lines of both edges of opening. This will aid in placing the facing and extension binding on placket opening. The front

of opening laps over the back, so sew strip for facing to front and an extension fold or binding to back. The facing should be $\frac{3}{8}$ inch finished and the binding $\frac{1}{2}$ inch. Baste, and stitch facing and binding just outside the basting line on seam of



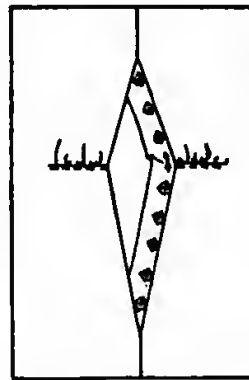
a. Seam on side of garment



b. Right side with facing and extension in place



c. Wrong side showing facing and extension



d. Right side showing snaps in place

FIG. 105. Placket for Side Opening of Dress

opening. Turn under free edge of facing and slip-stitch in place. Turn under free edge of binding, baste the fold on top of seam stitching, hem on stitching. Stitch the under- and overlaps together on the wrong side both at top and bottom of opening. Sew a hook and eye at waistline. Sew snap fasteners with ball on facing and socket on extension. Place snaps close enough together so placket will not gap. (Fig. 105.)

If a zipper is to be attached, it can be put in so that the actual fastener does not show. Stitch a piece of bias fabric

like dress, two inches longer than opening and $1\frac{1}{4}$ to $1\frac{1}{2}$ inches wide, to front seam edge, turn, and baste. (Fig. 106.) Turn under $\frac{1}{2}$ of seam allowance on left or back edge: Baste and stitch this edge to the tape of fastener close to metal. Close the placket opening, and pin in place as it is to be when fin-

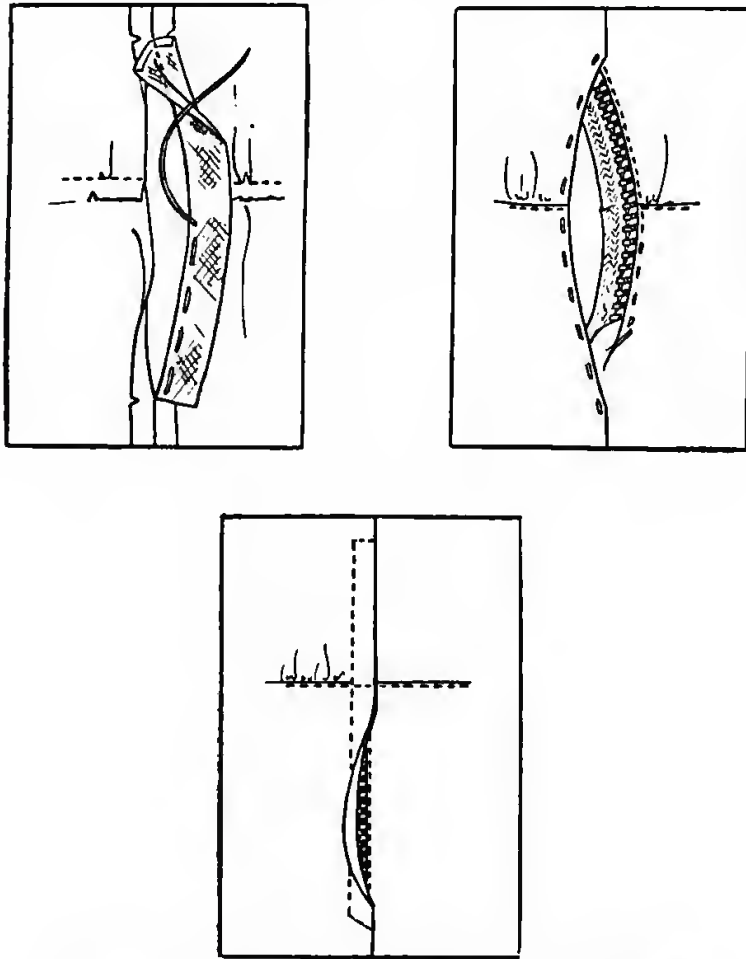


FIG. 106. Zipper Placket in Side Opening of Dress

ished. Turn garment to wrong side, pin, and baste free edge of tape to free edge of front facing close to metal of fastener. Line the fastener on back with a folded strip of fabric. (Fig. 106.)

Other Types of Plackets.—Various kinds of plackets are discussed in the chapters indicated in the following:

The hemmed placket, Chapter 12.

The bound and faced placket, Chapter 12.

Lapped placket with wide seam allowance, Chapter 13.

Lapped or two-piece placket, Chapter 13.

Simple lap placket with bound edges, Chapter 13.

Placket under a plait or tuck, Chapter 13.

Fasteners Used in Garment Construction.—The fasteners are varied, including buttons, buttonholes, loops, hooks and eyes, snap fasteners, and zippers, each of which has its appropriate use in garment construction.

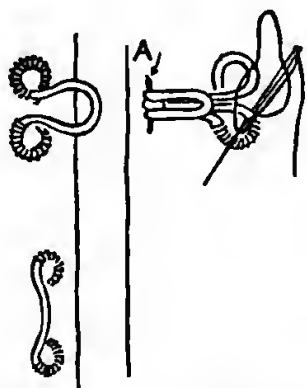
Hooks and Eyes.—Hooks and eyes are used instead of buttons where invisible fasteners are necessary. The bill of the hook is placed $\frac{1}{8}$ inch back from the edge of the opening to prevent its showing. Fasten the hook with a few stitches to hold it in place. If the hooks are in a position where they are liable to show, or for fine garments, the hooks should be sewed with a matching thread, using either the buttonhole or loop stitches with the purl on the outside of the ring. If using the over-and-over stitch for secure fastening, sew over the two rings at right angles to the edge with four over-and-over stitches. Reinforce these with four stitches over sides of ring, and four stitches under the bill of the hooks (at A) to hold the hooks firmly to fabric. Sew them on with a single, strong, matching thread. Before sewing, spread the hooks a little. (Fig. 107.)

There are two kinds of eyes for each hook. Choose the curved ones for garments where there is a strain and use the peets for flat closing without strain. The eye should extend a little beyond the edge so that the garment can be fastened easily. Place peet fasteners a little back from edge for easy fastening.

BLIND LOOPS.—These are used on garments fastened with hooks and eyes to take the place of metal eyes. (Fig. 107.) They are used where there is only one loop to be made, as at neckline on a slashed opening. They are also used, in place of fabric loops, on openings at wrist.

TO MAKE LOOPS.—Mark position of loop opposite hook, fasten the thread, and bring the needle up through fabric. Make a bar tack of four threads. (Fig. 108.) Loop over the bar tack from left to right, keeping the purl facing the hook. Cover the bar tack with loop stitches and fasten securely at end. Use the eye of needle in looping over the bar tack.

Snap Fasteners.—Snaps are used on flat surfaces where there is no strain. They should be sewed on inconspicuously



Notice position of the peet eye. The strain of the hook is against the curve. It does not pull out of shape.

FIG. 107. Hook and Eye

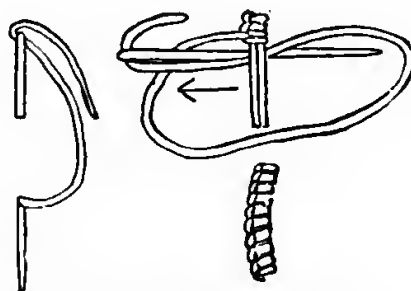


FIG. 108. Loop for Eye

and placed near enough the edge to prevent any turning of garment edge. The appropriate size of snap should be selected for place of garment and type of fabric.

To space snaps, hooks, and eyes evenly, use a prepared gauge.

To reinforce snaps on sheer fabrics, sew a tiny disk of same fabric or matching seam binding under each snap.

MARK LOCATION FOR SNAP FASTENERS.—The ball is placed first on wrong side of upper edge of opening. Chalk the ball and press it on to the corresponding edge of opening. This will leave a chalk mark for placing socket.

TO SEW ON SNAPS.—Use a single matching thread. Fasten thread or use knot under snap. Take four overlapping stitches in each hole. Carry thread between the two thicknesses of

fabric, or under the snap from one hole to the next. Do not let thread show on the right side. Fasten thread on the wrong side after completing the last hole. (Fig. 109.)

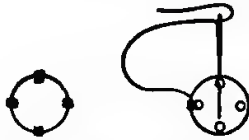


FIG. 109. Snap Fastening

Slide Fasteners (Zippers).—These convenient fasteners can be bought in many colors and lengths suitable for neck openings, fronts of blouses, plackets, and dress lengths. They are especially adapted to sport garments, and if skillfully placed and stitched they have many advantages.

1. Mark opening with line of basting the length of metal fastener, plus $\frac{3}{4}$ of an inch. Baste piece of garment material $1\frac{1}{2}$ inches square to lower part of opening right sides of fabric together. Stitch $\frac{3}{16}$ of an inch on each side of basting and across bottom, turning a square corner.

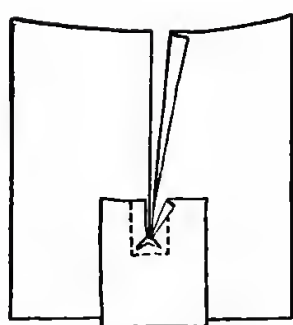
2. For opening, slash both garment and facing, on center basting line to within $\frac{3}{16}$ of lower stitching line, then diagonally to corners.

3. Turn patch to wrong side with seam stitching on edge of opening, baste, and press seam edges.

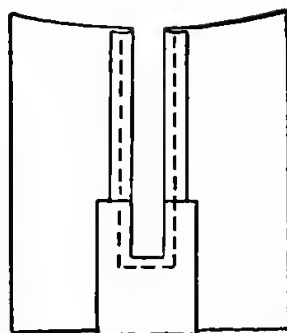
4. Close slide fastener. Fold over upper edges of tape. Pin and baste folded edges of garment opening to tape of fastener, keeping clear of metal, and easing slightly. Top-stitch around fastener and finish neatly on wrong side. (Fig. 110.)

Fabric Loops for Garments.—Loops of fabrics are often suitable for buttonholes on openings where a buttonhole could not be used. They are decorative, easy to apply, and are especially appropriate for use on bound or faced slashes. Loops may be made from the dress fabric, of silk, or of other fabrics for decoration.

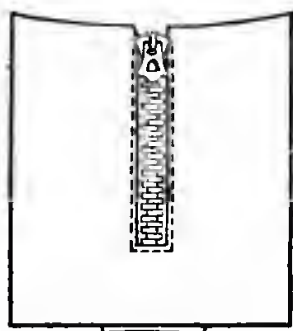
Precaution: Loops are very difficult to prepare of fabrics that fray. The fabric must be cut on the true bias, and the thickness of the loop will depend upon the fabric and the seam



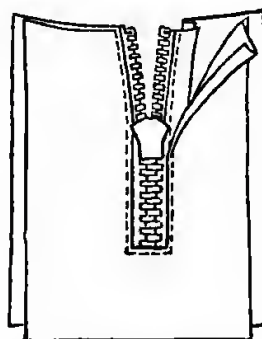
Opening cut



Edge turned back wrong side



Zipper in place



Stitched and faced

FIG. 110. Zipper Fasteners

allowance with which the loop is filled. Since the seam allowance acts as a filler, care must be taken to make it of the right size to give a round effect to the loop. Thin fabrics require wider seam allowance than heavy fabrics.

TO MAKE A SAMPLE LOOP.—Make a sample loop of your fabric for practice in making, as well as to estimate the required width of strip—width of seam for stitching from fold.

TO MAKE FOLD.—Cut a bias strip 1 inch wide. Fold through center lengthwise, baste the edges together, then baste $\frac{1}{4}$ -inch seam allowance from fold. This basting may be omitted if you can stitch accurately without it. Stitch outside basting nearer the fold. Stretch the bias as you stitch. This stitching must be accurate, for the beauty of the cord or loop depends upon their evenness. After stitching loop, slip an end of bodkin or tape needle into end of stitched fold. Sew it securely. Force the fabric gradually back over the needle,

and do not allow it to bunch at needle end. With some fabrics the start is difficult. After testing the sample, you will know how to estimate width for cutting bias and distance to stitch from fold for the size of loop suitable for your fabric.

To CUT LOOPS.—Allow for diameter of button, plus allowance for stitching on garment.

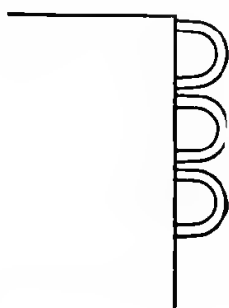
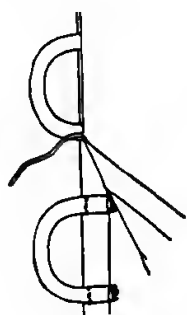
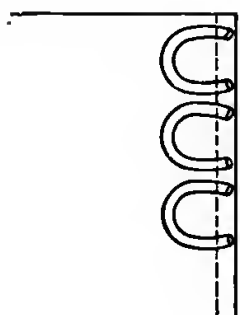
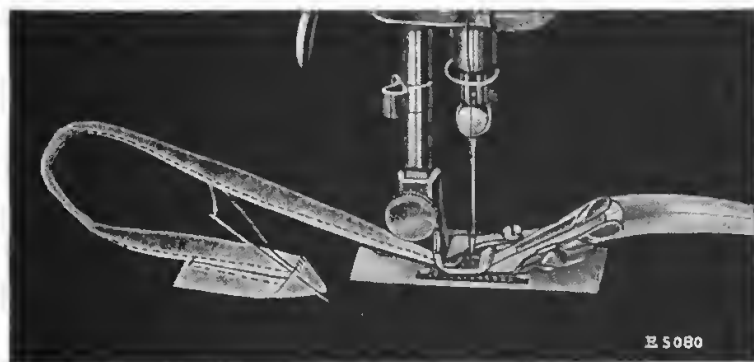


FIG. 111a. To Apply Loops



FIG. 111b. Machine-Made Loops



Courtesy Singer Mfg. Co.

FIG. 111c. Making Loops by Machine

TO APPLY LOOPS.—They are applied with the ends of loops extending toward the edge of seam with the loops toward the garment. To aid in placing them uniformly, run a line of basting on seam allowance. For a slashed opening, $\frac{1}{4}$ inch or less will be enough seam allowance. Tack the loops in place outside the basting, spacing them evenly from $\frac{3}{4}$ to 1 inch apart. Use a gauge. They must be caught in place when the seam joining facing and garment is stitched in place. (Fig. 111a.) As the facing or binding is turned to wrong side for final finishing, the loops will move forward in position ready for use.

FLAT LOOPS.—If a flat loop is called for, it will be made as above, excepting for the stitching of a narrower seam on loop before turning. There should be very little fabric inside loop if the object is a flat tubing. Press the tubing flat. In applying each loop, fold the tubing in half across length. Fold the center fold toward you, forming a folded miter on each edge. (Fig. 111b, c.) These loops may be made of commercial bias binding.

Bound Buttonholes.—Bound buttonholes should be made before the dress is assembled. They are not only easier to handle but more accurate, and better workmanship is possible on parts of garment. Fashion dictates the number, placing, and size of buttonholes, but they are seldom less than $\frac{3}{4}$ inch in length. They are used on all parts of garments, either for decoration or as a means of fastening the garment. The method of making and finishing them varies with the type of fabric used and location on the garment. The buttonholes are made through one thickness of fabric and finished on wrong side securely by overcasting, hemming, or facing.

The binding may be cut from the same fabric as the garment, or a contrasting fabric or color may be used. The binding may be cut lengthwise or bias. The former is easier to apply and a better-finished buttonhole is possible, but the bias cut is very attractive and decorative in such fabrics as twills, checks, or stripes.

The placing and size of each buttonhole must be carefully marked before any cutting is done. Two rows of parallel basting down the full length of their intended placing may indicate the size of the buttonholes. A series of small basting stitches should locate the position of buttonholes. Use a gauge, for accuracy of measurement is important.

When a series of buttonholes is to be made, the quickest and easiest method (as followed in shops), after placings have been marked, is to baste the binding pieces on all bastings, indicating measurements. Stitch, slash, and finish each in succession. Then give a final pressing of the completed section.

For all types of buttonholes, cut the binding piece at least $1\frac{1}{2}$ inches wider than the finished buttonhole. Do not try to work with too small a binding, for then the buttonhole cannot be finished neatly. If too large a piece is used, it can be trimmed after the binding is turned to wrong side.

To make a worked buttonhole, see Fig. 184.

To make a tailored worked buttonhole, see Fig. 234.

TO MAKE BOUND BUTTONHOLE.—For all fabrics except sheers (organdy, chiffon) and heavy woolen fabrics, bound buttonholes are constructed as follows:

1. Baste the binding strip (bias or lengthwise strip) with the right side to the right side of the garment, with the lengthwise center of the binding on the buttonhole marking. If a piece of thin fine fabric is used to reinforce the buttonhole, this must be basted on wrong side when basting binding in place. This is necessary if fabric stretches.

2. From the wrong side, on the stay, stitch on the machine $\frac{1}{8}$ inch away from line of basting. Start at the center of one side, turn a square corner, and stitch close to line at ends. Count the number of stitches at end so that you may make the other end the same size.

3. Cut on the center line of basting stitches to within $\frac{1}{4}$ inch of each end. Then cut diagonally into each corner as far as the machine stitching.

4. At each end, fold the little triangle of cloth to the wrong

side, then bring the binding through to the wrong side, forming an inverted plait at each end. Stitch this to the triangle, on wrong side, not to garment. Be sure there is no binding showing on right side at ends. The two folds of binding must meet exactly in center. The binding edge may be turned under and hemmed at line of stitching, or edges may be overcast if garment over buttonholes is to be faced. In the latter case a slit must be made at each buttonhole on facing. It may then be turned and binding hemmed. (Fig. 220.)

Catch-stitch each buttonhole along center folds to keep in place while pressing and constructing garment.

For bound buttonholes for sheer fabrics, see Fig. 220.

For bound buttonholes for heavy wool fabrics, see Fig. 233.

Buttons.—Buttons new in color, shapes, sizes, and materials are introduced each season at the same time as new designs and fabrics. Select buttons that are suitable to the type of garment and fabric.

Buttons tending toward flatness usually have 2 or 4 holes in center of buttons. Shaped buttons usually have a shank of metal as a part of the button. Buttons of fabric are made over a mold by shaping fabric over mold either by hand or machine. In the latter case, the shank is formed by the fabric.

TO SEW ON BUTTONS.—Use a coarse thread of color matching garment. Make a fastening stitch directly underneath place for button. Bring the needle up through the upper right hole at 1, down at 2, up at 3, down at 4. Loosen up the threads and place a pin under them on top of button. (Fig. 112.) Then continue the stitches until 4 have been made. Leave the sewing thread between button and fabric. Wind thread around threads between button and fabric, forming a shank between button and fabric. This lessens the strain on both fabric and button. The wrong side of the garment will show two parallel lines of stitching. (Fig. 112.)

SHANK BUTTONS.—Use a strong thread and fasten thread underneath where button is to rest. Bring thread through from wrong side to right side of fabric, pass thread through

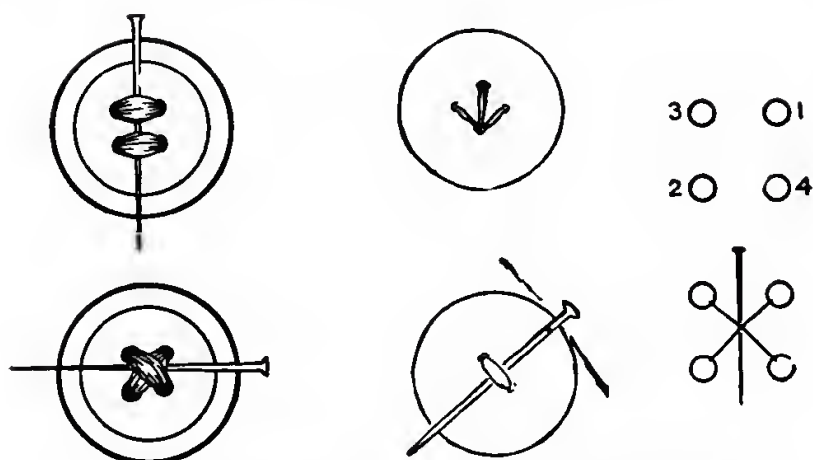


FIG. 112. Various Methods of Sewing on Buttons

shank and back to wrong side. Repeat until securely fastened. Keep the stitches easy enough to let the button turn in place. (Fig. 113.)

FABRIC BUTTONS.—Button molds are covered with fabric, either like the garment or a contrasting fabric. If small, they



FIG. 113. Shank Button

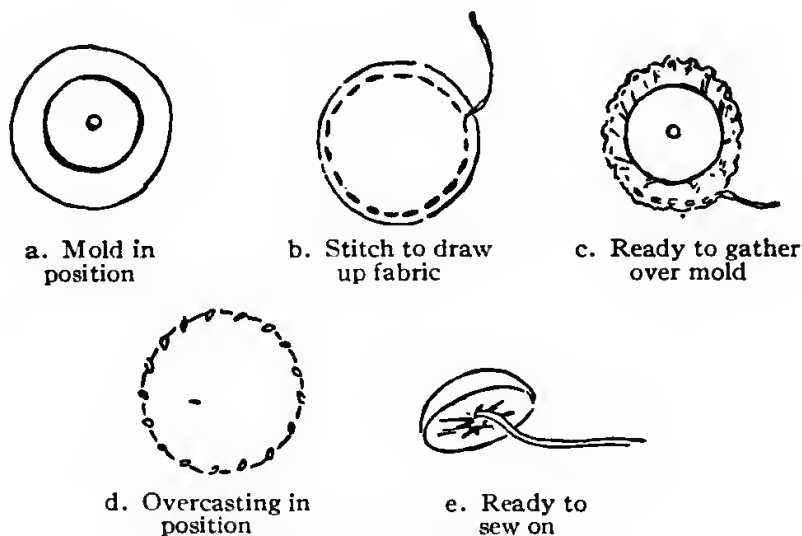


FIG. 114. Button Molds

are generally made by people who specialize in this type of work. Large buttons can be covered easily by hand.

TO MAKE BUTTONS OVER MOLDS.—Cut a circle of fabric with a diameter $\frac{1}{8}$ inch larger than twice the size of the button mold. Run a gathering thread around the circle. Place the mold in the center of wrong side with the rounded side next the fabric. Draw up the gathering thread. The ends of cloth should meet in the center. Sew back and forth across the underside of the button, catching the gathered portions together until it is firmly fastened. Trim off ravelings. The gathered portion should form a shank, so be careful not to make a clumsy finish. (Fig. 114.)

For patch pockets, consult Chapter 12.

For bound pockets, consult Chapter 13.

For welt and tailored pockets, consult Chapter 13.

Other Problems

For blouse use same outline, stitches, and processes as for dress.

For child's dress, consult Chapter 12.

For underwear, consult Chapters 12 and 13 for dainty finishes and trimmings.

For evaluation of results, consult Chapter 7.

Remodeling

Use of Garments on Hand.—At the beginning of each season when looking over your garments to make an inventory of what you have on hand, examine clothing of all kinds to see if any of them ought to give further service either for yourself or for another member of your family. Sometimes you will find two garments which may be combined to make a single remodeled one.

Remarkable new effects can be accomplished by dyeing and cleaning garments which at first appear worthless.

Suggestions for Remodeling.—When combinations of fabrics are in fashion, remaking is a simple matter, for many

charming ensembles can be worked out. Wool fabrics can often be combined with silk fabrics. For example, short coats and boleros of rough texture and contrasting colors are being worn with smooth fabrics. Many garments may be brought up to date by slight alterations of line, making sleeves smaller, shortening or lengthening of sleeves, adding new collars, cuffs, and belts of contrasting color or fabric. Slight changes in line direction, addition of godets or plaits, or some constructive processes produce interesting changes, for instance, such as slot seam, the strap seam, or yolk applied in new ways. These are only a few suggestions, so plan carefully for it is interesting to see what can be done with those garments that are too good to be cast aside.

Points at issue which must be determined before undertaking any remodeling are given below.

POINTS TO CONSIDER BEFORE REMODELING.—Is the garment worth remodeling, either from an economical point of view or from the satisfaction you take in the finished garment which will compensate for the time and effort you will put into it? It is worth while to remodel a garment if you find it can be cut over to advantage, that is, if the parts are large enough to be utilized. If the garment is cut up into small sections, do not attempt it, but use the fabric for crocheted or hooked rugs. It is not advisable to remodel when too great a cash outlay is required for new fabrics. If two garments on hand can be combined advantageously, then it is wise to use them.

Can your time be spared from other tasks that seem more pressing, or are you using time that ought to be devoted to needed rest or recreation?

Can the garment be utilized for some smaller member of the family?

To remodel successfully, it must be done with as much care and thoughtfulness as you would give to the use of new fabrics. The greater your knowledge of constructive processes and the more ability you possess in altering and modifying patterns, and also the more taste and imagination you display, the more successful you will be in remodeling garments.

Examine the garment carefully and try to estimate your time and ability to undertake this type of construction. If you decide it is worth while, rip the garment carefully without stretching bias edges, and either dry clean at home or decide if the expense of having it done outside the home is justified. Will the fabric be improved by retinting or dyeing to darker tone? Modern dyes are simple to use and a great deal of satisfaction will result when care is taken to do a good job.

Skillful pressing is more necessary here than is the case with new fabrics, and it will aid in improving the appearance of fabric.

Selection of Pattern to Remodel a Garment.—Look over garment and visualize the number and size of dress sections. With shapes and sizes in mind, look over the pattern possibilities. Will the new pattern pieces fit on the available pieces of garment? Can the pattern be placed to avoid unsightly piecings, or can the piecings be made a feature of the design, thus adding to the attractiveness of garment?

Material Used.—If the new material is to be combined with the old, a careful plan must be made of the division of lines for use of the new and the old materials.

To prepare material, use points of scissors or razor blades and rip carefully enough not to tear or cut threads of fabric. Do not stretch any parts out of shape by pulling in ripping. Ripping is one of the most important steps in remodeling, so experiment and find the easiest way to rip.

Renovation.—The next step would be the renovation of fabrics. Review *Attractive Clothes*, Chapter 13.

1. Brushing. Sometimes this is all that will be necessary to put the fabric in good condition. Brush carefully with grain of fabric.
2. Steaming velvet and other pile fabrics.
3. Removing gloss and shine.
4. Sponging of the fabric and removal of spots may put the fabric in condition for use.

5. Will it be better to wash the fabric and thus give it a thorough cleansing? Test a small piece and see if the fabric is improved by this process.

If the fabric from two garments is to be utilized, more care must be taken, for it is more difficult to plan a good arrangement of fabrics.

It is impossible to give definite directions for remodeling, for styles change so rapidly that a suggestion for one season will not be of use in another season. Study fashion magazines and look over the layout carefully before selection of pattern. Use taste and judgment in combining fabrics, and your results should be satisfactory and worth while.

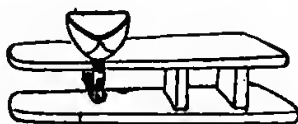
Pressing

Equipment for Pressing.—The equipment must be kept in good condition at all times.

IRONING BOARD.—The board should be smooth and well finished, and covered with enough layers of cotton felt, wadding, or flannel to make a firm but soft finish, with no hol-



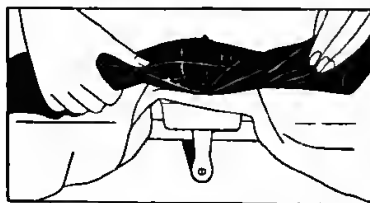
a. Ironing board



b. An iron on a sleeve board ready for steaming velvet



c. Pressing the edge of a velvet garment between wires



d. Steaming velvet

FIG. 115. Pressing Operation

lows, ridges, or wrinkles. Each layer should be firmly stretched and tacked underneath so securely that no wrinkles can develop. A final covering of unbleached muslin should be stretched on firmly and fastened securely. Removable covers can be made of drill or heavy unbleached muslin. Tapes may be sewed along the sides every 6 inches and tied to hold the cover in place. These covers can be laundered, and they will keep the stationary covers clean. A sleeve board is necessary for pressing sleeves, darts, seams, and collars. It should be padded as smoothly and firmly as the ironing board. The edges should be smooth and rounded. The equipment for pressing must be kept in good condition at all times. (Fig. 115.)

TAILOR'S CUSHION.—A tailor's cushion is necessary for the pressing of curved seams, tops of sleeves, darts, and any other parts with excessive fullness. The cushion can be made by stitching together two oval pieces of heavy muslin which should be stuffed firmly and smoothly with wadding or scraps of clean, white, cotton cloth.

PRESSING CLOTH.—Plenty of pressing cloths are necessary. They may be of drill, duck, or heavy, unbleached muslin. The sizing may be removed by washing and boiling when it is necessary.

POUNDING BLOCK.—These are flat wooden blocks for use after steaming.

OTHER EQUIPMENT.—These are:

- (a) A large sponge for dampening the pressing cloth for woollens.
- (b) A basin large enough for immersing the sponge.
- (c) A padded half-round stick or a padded broom handle 10-12 inches long.
- (d) Wire board for pressing velvet and nap fabrics. (Fig. 115.)
- (e) Iron. A 6-pound iron (electric) with a controlled temperature is excellent. Any other type of iron may be used if the one suggested is not available.

- (f) Steam pressing iron. A new rust-proof, all-aluminum, electric steam iron with automatic thermostat control can be used for advanced work.

Method of Pressing Silk.—Silks have been manufactured with a dressing or sheen that should not be removed by pressing. Do not dampen or use moisture where it touches the silk, for by removing the gloss it will waterspot. Too hot an iron must be avoided, not only because of the danger of scorching, but to avoid taking the "life" out of the silken fabric. Silks lose their "life" readily, especially with too hot an iron. If ironed, instead of being pressed, silks will wrinkle. Heat will occasionally change the color of a fabric, especially silk; therefore, it is wise, for that reason, to test the effect of heat first on a small sample. Use a cooler iron in this case.

Although silks need no shrinking or sponging, sometimes it is necessary to remove creases and a center fold.

It is important to press silk garments as they are being constructed, but it must be done correctly. Seams and hems must have a clear-cut edge.

To press silk seams, place the garment to be pressed on the ironing board with seams wrong side up. If the seam is to be opened, press it dry first or press open with the thumb nail, and then place a dry press cloth over the seam, and lightly draw a damp sponge or small wet cloth over the seam. This will give sufficient moisture to press the seam, but not enough to allow moisture to reach the silk and spot it. Press the tip of iron on seam to avoid edges of seam showing on right side and also to avoid wrinkling edge of seam.

In pressing wools and heavy silks use a heavy press cloth. On light-weight silks and sheers use a thinner cloth.

ANOTHER METHOD OF PRESSING SILK.—Press the silk from the wrong side with tissue paper between iron and silk. For right side pressing, a thin dry cloth (such as a good quality of cheesecloth or a thin muslin) may be placed next to the silk and an almost dry press cloth used over it. The moisture from the slightly damp cloth will be diffused over silk and

it will not waterspot. Always test silk fabrics before pressing. Some silks become limp and lifeless, some silks stiffen. Heavily weighted silk should be pressed as little as possible, because the heat is liable to hasten the deterioration and cause it to split. Elastic fabrics do not require so much pressing. Pongee and liberty silks should be pressed from wrong side when thoroughly dry. Crepe de Chine, if not badly wrinkled, can be pressed dry from the wrong side. Wash silks may be pressed while damp on wrong side with a warm, not hot iron.

When a fabric is elastic, such as crepe, the entire garment should receive the same treatment. Press with the lengthwise grain or thread of fabric, otherwise the fabric will be stretched out of shape.

PLAITS IN SILK FABRICS.—Press the plaits carefully with a moderate iron. When the bastings have been removed, the iron may be run under the plaits to smooth the parts underneath, and the plaits must be repressed to remove any marks left by basting.

Another method for pressing plaits is to place a folded paper or cloth underneath plait, while pressing. This will prevent marks from being pressed into garment.

SUMMARY OF RULES FOR PRESSING SILKS.—We now summarize the rules we have given for pressing silk fabrics. They are as follows.

1. Always press on the wrong side when possible. When not possible, cover material with a cloth or tissue paper.
2. Always press with grains of fabric.
3. Have plenty of press cloths and keep them in good condition.
4. Use a moderate iron, never hot.
5. Be careful when pressing a bias not to stretch it.
6. Keep pressing iron smooth and clean.
7. It is a wise precaution to test a fabric for reaction to pressing by testing a silk sample.

Pressing Synthetics and Cotton.—For synthetics, use a dry cloth and an iron that is not hot.

Cotton and linen are usually pressed when damp with a hot iron. To bring out the beauty of the linen weave, it should be pressed from the wrong side. Cotton should be pressed in the same fashion, because on some fabrics the shine is objectionable. However, some cottons press better from the right side.

Aids for Good Pressing.—Good pressing is an art, and bad pressing is worse than none. To press well, one must learn to use an iron skillfully and to make good use of steam. No hard-and-fast rule about the amount of steam required can be given, but, in general, the heavier the material, the more steam and the hotter iron is needed. For heavy material, a thick pressing cloth is necessary to carry sufficient moisture and steam to the garment being pressed. For thinner material, such as silks of all kinds, less steam and thinner pressing cloths are required. Nor should the iron be so hot for thin as for thick material. There is not a material, unless it is chiffon, that cannot be steamed slightly. By steaming slightly is meant wetting a thin piece of cloth, wringing it as dry as possible, then drying it even more by patting it with the hot iron until it is just damp, before using it on the material to be pressed. This thin, damp cloth will give just a small amount of the steam, and may be used on almost any silk material.

For heavy fabrics, the iron should be hot enough to snap sharply, especially if a damp cloth is to be placed over the garment to be pressed.

Do not use the fingertips to sprinkle water on any kind of material. Always use a cloth or sponge for only in this way can you be sure of an even amount of moisture and a flat, well-pressed seam.

Pressing removes all forms of wrinkles. Since the smooth hot iron may cause a luster on the fabric, it is customary to press on the wrong side or to use a cloth over the fabric. In order that plaits may be properly pressed into the right shape, they are basted in place before pressing and pressed again after bastings have been removed.

Textiles and Ironing Temperatures.—Each textile fabric has its own proper ironing and pressing temperature, dependent upon the nature of the textile and the weave and finish of the fabric. Most fabrics show scorch marks when an iron of excessive temperature is used.

Linen will withstand the most heat, cotton less, with wool in third place, and silk yet lower, while the synthetics (rayon, celanese, etc.) should be ironed at a lower temperature.

Pressing Suits.—For suits, use a heavy dry press cloth over the parts to be pressed. Sponge the press cloth, pressing it lightly at the same time. Then press lightly with an iron hot enough to force steam through the pressing cloth into the fabric. Allow the steam to escape occasionally by lifting the pressing cloth, and stop pressing before the garment is entirely dry. The pressing block is used to secure a sharp edge on hems, and wherever it is necessary to secure a flat finish. When removing the cloth, there should be an almost imperceptible steam coming from the fabric. Leave the garment in place as pressed until it is thoroughly dry. In the final pressing, all fabrics must be pressed with the grain of the material, not on the bias.

QUESTIONS

1. Name the factors to be considered before selecting a style for an ensemble. Are they of equal importance?
2. What is meant by the fundamental forms of construction? Show how each affects the appearance of a garment.
3. Explain how the fundamental lines of a dress can be used to make clothing more becoming.
4. What principles of design should be kept in mind when selecting a style for an ensemble?
5. Explain why it is necessary to consider the weight, texture, and color of a fabric for the pattern selected.
6. State the reasons for care in accurate measurements before buying a pattern for any garment.
7. How can you keep yourself informed of the style trends in silhouettes, fabrics, and colors?
8. Describe the cooperation that exists between the manufacturers of fabrics and the clothing designers.

9. List the most important points where extra care is needed to avoid an amateur effect in dress construction.

10. Explain how the lengthwise and crosswise grains of a fabric can affect the appearance of a fabric.

11. Compare true bias and garment bias in their methods of folding, cutting, and use.

12. List the reasons why the testing of patterns is so important before constructing a garment.

13. Outline the steps that will help you to avoid mistakes in placing the pattern on fabric in cutting out a garment.

14. Give the reasons for the insistence of accurate marking of seam allowance.

15. (a) Describe three methods of marking the seam allowance that you consider most satisfactory. (b) When should each method be used?

16. What is meant by staying the edges of a garment? Why is it important?

17. (a) Give directions for pinning, basting, stitching, and finishing darts. (b) When can darts be omitted?

18. Explain how to pin, baste, and stitch the side seams of a dress.

19. List the necessary precautions to take in preparing a dress for its first fitting.

20. (a) Explain the advantages and disadvantages of right and wrong side fitting. (b) Which method should be used for the final fitting? (c) Why?

21. What determines the type of finish to be used on seams of silk fabrics?

22. Give suggestions that will aid in the correct cutting and piecing of bias strips.

23. Outline the important steps for the setting in of sleeves in a silk dress with due regard for present style tendencies.

24. Make a list of the factors that would guide you in the choice of a type of pocket to use in a silk ensemble.

25. (a) Is it always possible to make an inconspicuous placket in a silk garment? (b) What care is necessary to avoid making it conspicuous?

26. Explain the style tendencies which influence the choice of types of undergarments.

27. What points must be considered in deciding whether it is wise to remodel garments?

28. Describe a score card or any aid that will help you in the criticism of an ensemble or silk dress that you have constructed or purchased.

REFERENCES

- Balddt, Laura I. Clothing for Women (revised). J. B. Lippincott Co.
- Balddt, Laura I., and Harkness, Helen D. Clothing for the High School Girl. J. B. Lippincott Co.
- Brown, Clara, and Others. Clothing Construction. Ginn & Co.
- Butterick Pattern Company. Butterick Sewing Book.
- Condé Nast Publications. Vogue Book of Smart Dressmaking.
- Donovan, Dulcie G. The Mode in Dress and Home. Allyn & Bacon.
- McCall Publishing Company. Dressmaking Made Easy.
- Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress. Houghton Mifflin Co.
- Simplicity Pattern Company. Sewing Book.
- Spool Cotton Company. Sewing Secrets.
- Singer Sewing Machine Company. How to Make Dresses the Modern Singer Way.
- Todd, Elizabeth. Clothes for Girls.

CHAPTER 7

STANDARDS FOR JUDGING GARMENTS

Importance.—In the preceding chapters we have been considering standards for the evaluation of undergarments and dress. We shall use the same standards now in judging ensembles and wardrobes, for those standards are, in their essential points, the same for all types of garments.

The standards do not change, but the method of applying them will vary in many cases. The characteristics and standards for judging an ensemble will necessitate a new point of view, because of the inclusion of accessories. For this reason, the evaluation will necessarily be broader and more intensive in its application.

Methods of Establishing Standards.—In analyzing a garment, ensembles, or wardrobes, there are usually three methods in use for evaluating or establishing criteria for judging:

1. A series of questions may be prepared covering the points that are adapted to the problem or to individual need and from which definite conclusions can be drawn upon which to base evaluations.
2. Use of type score cards prepared by experts and from which data will be secured for planning an individual score sheet that will more definitely meet particular needs.
3. A style show or a dress revue of the garments or ensembles constructed in class, with a final group criticism. This is a valuable procedure if skillfully managed by an interested, tactful teacher, experienced in handling this type of problem. The criticism must be well organized and the members of the group must be in sympathy with the problem.

We can learn more easily to select garments through a discerning study of standards established for—(1) choice of design, (2) choice of color, (3) workmanship, (4) selection of fabrics, (5) general appearance.

For purposes of learning how to judge until experience has been gained, all evaluations should be practiced under a teacher's instruction and guidance. In addition we must analyze and criticize many types of score sheets that have been experimented with, and either accept those as models or prepare individual plans to fit our own problems. The chief value in the use of score sheets lies in the fact that score sheets provide a uniform method by which the essential points are emphasized, and they also furnish a basis upon which an evaluation can be easily checked. With this preliminary training, score sheets can be used as a practical way of evaluating all styles of garments, accessories, wardrobes, and ensembles. You can learn to judge and adapt criteria to your own productions, and these same criteria can also be applied to those garments you buy. In either case, if you are thorough in your attempts at evaluations, you will become discriminating in your choices. You will also derive a great deal of satisfaction out of being able to select garments that are practical, serviceable, comfortable, attractive, smart in appearance, and within your budget allowance.

For purposes of study we will list factors that we consider important, and weigh their relative values for purposes of eliminating from our consideration those points with which we are not concerned, in the particular garment we are attempting to judge. A list is made of the important factors that are to be evaluated, and to each is assigned its share of 100%, according to the determined relative value in the complete score.

Opinions differ regarding the practice of allotting percentages to each item, but although percentages are useful in distinguishing between the relative values of the factors or points being considered, they are not absolutely essential.

Since high standards are more apt to be an incentive to

effort to most people, and results are usually more superior and uniform than they are with lower or no standards, we must see to it that we learn to discriminate and to meet the higher standards.

Standards for the Selection of Ensembles and Wardrobes.—Each costume assembled must fulfill the requirement of an ensemble. This means that there must be harmony in color, line, and texture between the individual and her garments; and every detail in accessories—hat, shoes, hosiery, gloves, jewelry, handbag, handkerchief, hairdressing, and cosmetics—must be carefully planned for every occasion. Furthermore, every detail should measure up to the most exacting requirements of that ensemble. Therefore, in the planning and judging of a wardrobe and its essentials, attention must be given to every detail to see that it meets the standards set up by the principles of art in color, line, texture, and suitability.

Other Requirements of Criteria in Judging.—All garments of the wardrobe must meet the standards of good workmanship. The wardrobe must also meet the economic need. It is not always the person with the greatest amount of money who presents the most attractive, distinctive appearance in her daily activities. Attention to details and good planning will often accomplish results on a small income. Smartness and distinction in an ensemble require:

1. The knowledge of and emphasis of individuality in every costume of the whole wardrobe.
2. Every detail of the ensemble must apply the principles of design in line and color.
3. The ensemble and wardrobe in every detail must express suitability with the individual—and meet the individual's needs on various occasions. Two well-chosen ensembles are of more value than six haphazardly chosen ones.
4. Health requirements. One cannot be comfortable and well poised if either inappropriately or unhealthfully clothed.

5. The wardrobe must meet the requirements of, and be regulated by, the type of community and requirements of the social life, which in turn is governed by good taste. Good taste and smartness do not mean extravagance in dress.

Evaluating an Ensemble.—In considering the characteristics and standards of judgment for the purpose of scoring an ensemble and the wardrobe, let us consider and ask a few questions of ourselves to see if we understand how to proceed.

CHOICE OF DESIGN.—Is the garment and its accessories suitable to my personality as I am?

Will it emphasize my attractive points and minimize the unattractive features of my personality?

Have I selected the fabric and texture that is suitable not only to the design, but to my skin texture, size, and age?

Is the ensemble smart and distinctive in appearance?

Have I succeeded in creating a pleasing and harmonious effect?

Have I kept in mind the art principles and not violated them in my efforts to make the design individual?

HYGIENE PRINCIPLES.—Can my clothing be criticized from the hygienic standpoint?

Have I kept in mind the maintaining of bodily temperature in my selection of summer and winter clothing and accessories?

Do all the garments in my ensemble and wardrobe allow for freedom of motion?

Have I allowed any part of my wardrobe to constrict parts of my body and thus distract from comfort and ease of motion—such as ill-fitting girdle, tight sleeves, high heels, or hats that add to discomfort in shape or placing on head?

Have the hygienic requirements been met in their construction?

CHOICE OF COLOR.—Does the color enhance the sheen and light in hair and eyes?

Is the color appropriate to my personality?

Do the colors in the ensemble seem to belong together and harmonize with the skin coloring?

Has the choice of texture added to its becomingness by reflecting color in the face, thus enhancing or subduing the color? Have the accessories aided in their color reflection?

Are the color combinations the best that I could select for my ensemble or wardrobe?

CONSTRUCTION OR WORKMANSHIP.—Does the fabric look as though it had been carefully handled, carefully stored, and hung in the closet? Have the accessories been well cared for and kept in correct containers when not in use? Have the technical processes, such as stitches, seam finishes, hems, bindings, and facings, been selected to contribute to the appearance of smartness? Have the garments been correctly pressed and kept in good condition by care and pressing?

SELECTION OF FABRICS.—Have fabrics which require a minimum of care in their upkeep been selected for the ensemble and wardrobe?

Do the garments in the wardrobe show that money, time, and effort have been saved in their construction?

Do the garments and accessories in the wardrobe show that they were selected for durability?

GENERAL APPEARANCE.—Do the garments in the wardrobe show an ability and cleverness in attaining an individuality in clothes selection which is distinctive in style and good taste, and which is superior in workmanship?

Do the garments in their care, handling, and putting on show due regard for personal neatness?

Do the garments fit you and look as though they were made especially for you?

Do the ensembles appear as though wise choices of accessories have been made in their selection, assembling, and care in wearing?

You may use the above questions to evaluate an ensemble or wardrobe with or without percentages, or you may adapt any score sheets which have been issued by federal, state, or

college bureaus. Sample score cards are given below to help you make an individual score card for the evaluation of your ensembles and wardrobe.

Score Cards.—There is always a demand for a plan of judging the relative values of clothing and wearing apparel—called score cards—and thus placing before the consumer a definite, concise evaluation of the clothing or wearing apparel produced or purchased. Experience has proved the value of such an evaluation, particularly in clothing. In fact, there has been a growing practice of judging garments and costumes by the definite requirements set up on score cards—either planned by expert judges, or adaptations of those already planned by clothing experts in government or state universities. While there may be, or may not be, a percentage allowed each item on the card, nevertheless the inclusion of percentages does call attention to the relative values or importance of the different points that should be considered in selecting or making a garment.

The Home Economics Department of the United States Government has made a study of this subject and offers samples of score cards.

Score cards have been prepared:

1. By committees who are judging garments sent in by people contesting for prizes at state fairs, department stores, and fashion shows.
2. By teachers to evaluate and rate the garments of a class.
3. By individuals to help them to learn to evaluate garments.

The score cards given here are not suggested as ideal, but are offered in the hope that they may be one step toward bringing some uniformity in the great variety now being used. They are compiled after a study of cards submitted by various state clothing specialists. All scores being considered for use, however, should be published and studied before any contest, in order that the contestants may know the standards by

which their work is to be judged. Many of the scores are given in greater detail than will be required. In such cases it is suggested that only the main heading be used.

SCHOOL, HOUSE OR STREET DRESSES

	Points
I. Materials Used, including trimmings.....	30
Suitability to design and purpose of dress.....	15
Durability of materials.....	10
Laundering and cleaning qualities	5
II. Design and Color	20
Suitability to occasion.....	10
Individuality	5
Beauty of line and color.....	5
III. Workmanship	30
Choice and neatness of seams, hems, finishes, etc....	15
Perfection of stitching (hand or machine).....	15
IV. General Appearance	10
Cleanliness	5
Pressing	5
V. Relation of Garment Value to Cost in Time and Money...	10
TOTAL SCORE	100

Sample Scores

Score Cards for Judging Clothing Construction.—In compiling these scores an attempt has been made to give the proper value to such items as the design of the garments and the selection of materials. While workmanship is important, there is no doubt that too much emphasis has been given to it in the past at the expense of other equally valuable considerations.

Rules for all contests should be distributed in advance and should include the following points:

The contestant shall attach, to the garment entered, a record of time used in making it and a complete itemized statement of the cost of the materials used in its construction. The general age group for which the garment is intended should be given, for example, child, high-school girl, middle-aged woman, or elderly woman.

AFTERNOON, EVENING, OR PARTY DRESSES

	Points
I. Design and Color	30
Beauty of design and color combination.....	20
Suitability to occasion and age of wearer.....	5
Individuality	5
II. Materials Used, including trimmings.....	20
Suitability to design and purpose of dress.....	10
Cleaning qualities	10
III. Workmanship	30
Choice and neatness of seams, hems, finishes, etc....	10
Perfection of stitching (hand or machine).....	10
Fit of dress	10
IV. General Appearance	10
Cleanliness	5
Pressing	5
V. Relation of Garment Value to Cost in Time and Money.....	10
TOTAL SCORE	100

COMPLETE COSTUMES OR ENSEMBLES FOR HIGH SCHOOL OR COLLEGE
GIRL

	Points
I. General Appearance	15
General design and color combination.....	10
Individuality	5
II. Suitability to Person for Whom Planned.....	20
Artistic Aspects	10
Design and color.	
Materials.	
Health Aspects	10
Comfort.	
Protection.	
III. Completeness of Costume with Accessories.....	10
IV. Economic Aspects	20
Durability of materials	5
Value in relation to cost.....	5
Judgment shown in distribution of cost among ac-	
cessories	5
Cost of upkeep	5
V. Suitability to Season, Use.....	15
VI. Workmanship	20
Neatness and quality of stitching, seams, hems, neck	
and sleeve finishes	10
Fit of ensemble	10
TOTAL SCORE	100

WOOL COATS AND SUITS

	Percentages
I. Materials Used, including trimmings.....	20
Suitability to design and purpose of garment.....	10
Durability of materials	5
Cleaning qualities	5
II. Design and Color	20
Suitability to purpose	5
Beauty of line and color.....	10
Individuality	5
III. Workmanship	50
Detail of construction	30
Seams.	
Collar and facings.	
Pockets and fastenings.	
Lining.	
Tailored appearance	15
Pressing	5
IV. Relation of Garment Value to Cost in Time and Money....	10
TOTAL SCORE	100

Individual Scores.—Students should develop a habit of making simple scores on costumes and garments (a) on exhibition, (b) in fashion stores or displays, and also (c) individual garment work. The following score card has been planned and tried out by high-school girls.

I. Choice of Design	25
Suitability	10
Type of figure.	
Personality.	
Fabric and texture.	
Distinction and pleasing effect	5
Individuality of design	5
Hygienic principles	5
Freedom of motion.	
Lack of constriction.	
II. Choice of Color	15
Suitability	10
Type of personal coloring.	
Personality.	
Design.	
Combination of color	5
III. Construction or Workmanship	20
Technique of handling material	5

Selection of technique, seams, finishes.....	5
Stitching (machine and hand)	5
Pressing	5
IV. Selection of Fabrics	20
Easily cared for	5
Cost in relation to making	5
Durability	5
Hygienic quality	5
V. General Appearance	20
Smartness	5
Neatness	5
Fit of garments.....	5
Taste and judgment displayed.....	5

These percentages are suggested only as meeting the needs of the particular group who planned them.

Remodeled Garments.—Contests of this kind usually arouse great interest and are important in teaching conservation of textiles. Their chief disadvantage is that often so much emphasis has been laid on constructing a garment without any cash expenditure that the actual value of the result has not been adequately considered. Fabrics which have received hard wear may be so weakened that time and effort used in their reconstruction is wasted.

In such contests the student should submit an illustration or sketch of the original garment with explanation of the method used in reconstruction. Such processes as redyeing, cleaning, pressing, or turning should be stated. The time required to make the garment, and an itemized statement of the cost of any necessary new materials purchased, should also be given.

	Points
I. General Success of Remodeling	30
Successful selection of pattern	10
Successful use of material for pattern.....	10
Suitability of result to use.....	5
Durability of result	5
II. Design and Color	30
Selection of style	10
Color combinations	10
Texture combinations	5
Textile design combinations	5

III. Workmanship	30
Choice and neatness of seams, hems, finishes, etc....	10
Perfection of stitching (hand or machine).....	10
Fit of garment	10
IV. Relation of Value to Cost in Time and Money.....	10
TOTAL SCORE	100

QUESTIONS

1. Name the three methods that are in use in evaluating garments and ensembles.
2. Compare the methods of evaluating garments for ease of use and efficiency in judging.
3. (a) What are liable to be the difficulties in conducting a dress revue? (b) How would you overcome these difficulties?
4. Explain what is meant by standards of evaluation.
5. Who determines what standards of evaluation should be set up?
6. Name the chief values attached to judging or evaluating garments.
7. Suggest ways of growing in ability to evaluate garments.
8. List the values that may be claimed for the use of score cards.
9. Make an individual score card for some garment you have completed.
10. Compare your individual score card with type scores. Explain the variations.
11. Explain what factors are necessary for a smart and distinctive appearance.
12. What is meant by good workmanship? List the points you would look for in determining good workmanship.
13. Explain the points you would include in general appearance.
14. Criticize and correct, if necessary, any score card that you have studied and used.
15. Give your estimate of the value of learning to evaluate garments or ensembles.
16. What criteria would you use to determine the successful use of material?
17. Give examples of the ingenious use of materials.
18. (a) Does the knowledge of standards alone insure that you will always be dressed in good taste? (b) Explain what else is necessary.
19. List the factors which should determine whether it would be wise to remodel a garment.

REFERENCES

- Baker, Lillian C. W. Clothing Selection and Purchase. The Macmillan Co.
- Baldt, Laura I., and Harkness, Helen D. Clothing for the High School Girl. J. B. Lippincott Co.
- Buttrick, Helen G. Principles of Clothing Selection. The Macmillan Co.
- Donovan, Dulcie G. The Mode in Dress and Home. Allyn & Bacon.
- Dooley, William H. Clothing and Style. D. C. Heath & Co.
- Goldstein, Harriet and Vetta. Art in Everyday Life. The Macmillan Co.
- Hempstead, Laurene. Color and Line in Dress. Prentice-Hall, Inc.
- Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress. Houghton Mifflin Co.
- Story, Margaret. How to Dress Well. Funk & Wagnalls Co.
- Trilling, Mabel B., and Williams, Florence. Art in Home and Clothing. J. B. Lippincott Co.

CHAPTER 8

FABRIC DECORATION—SURFACE DESIGN

Historical Development.—Fabrics have been decorated in some way by all peoples in all ages of history. The method of decoration has depended upon the artistic genius of the people, the influences at work on them and the materials at hand. Like painting and sculpture, fabric decoration reflects the culture that produced it. From the exquisite medieval church vestments, we can read the patient tireless workmanship of a handicraft age; the influence of the East on their color and design, brought into Europe by the Crusaders, and most important of all, the power and inspiration of the Roman Catholic Church. Look at our own beautiful modern silk prints. The chemical research of the last fifty years made possible the thousand different colors. Scientific genius created fine strong threads and wove them into soft beautiful textures upon which are printed countless varieties of designs, selected from the artistic heritage of the entire world.

The love of beauty and the desire to be attractive, which led to primitive body painting, the wearing of jewelry and ornaments, and the use of clothing at all, inspired fabric decoration. For the sake of clarity, we shall divide fabric decoration into two main groups: (a) surface decoration, and (b) structural decoration.

Surface and Structural Designs.—Take samples of cretonne, embroidery, linen damask, and poplin, and examine them carefully under your pick glass. Unravel the threads. See whether the decoration is on the surface of the cloth or whether it is a part of the very structure of the fabric. Place the samples in your notebook with a description under each one. How was the decoration of the fabric achieved in each case?

You will notice that in the case of the cretonne and the embroidery, the decoration was produced *on the surface* of the fabric. In other words, the cloth was completely woven before the design was applied. The cretonne was a plain-weave, heavy cotton to which a color design was added by machinery on its surface. The sample of embroidery was originally a piece of plain-weave material upon which a design was produced by hand with needles and yarns, or by a similar mechanical process. These two samples are an example of surface decoration. You have only to look at your own clothes or the furnishings in your home to find other examples. The printed silk dress you wore last spring, your chintz curtains, your seersucker tennis shorts—each fabric in these articles depends for its decoration upon a finishing process applied after the fabric was woven.

Now let us look at the other two samples. The linen damask has a floral design which is a part of its structure. The pattern has been woven into the fabric itself, as you noticed when you unravelled the threads. The design and the cloth are one unit, not two separate things as in the case of embroidery. Similar observations apply to the poplin sample. The cord effects are woven into the fabric; they are formed as the fabric is being woven, instead of being applied after it is woven. This method is called *structural decoration*. Other examples will occur to you, such as your mother's brocade bag or your brother's herringbone tweed coat.

IMPORTANCE.—Both types of fabric decoration are in wide use today. The cost of surface decoration is considerably less than that of the structural method. Consequently, attempts are being made to reproduce synthetically structural designs by surface methods. Checks, stripes, and plaids, formerly produced as structural designs, are now successfully simulated by printing the design on both sides of a plain-weave fabric (duplex printing). Crepe effects are made by means of a paste or caustic which causes the fabric to shrink in certain definite parts. Dotted swiss effects are imitated by permanent dots of paste on the face of the fabric.

There is usually a more subtle shading and a softer texture in structural design fabrics. But, in general, there is little choice from an artistic point of view between the two methods of design. The more closely each method approaches technical perfection, the more difficult it is to tell them apart. Some French embroideries are so fine, it is hard to imagine that any human hand was delicate enough to have executed the tiny, precise stitches. The ancient Peruvians created textile miracles. At the Metropolitan Museum of Art, their beautifully decorated tapestries and embroideries may be seen and compared. Peruvian embroidery was raised to such a degree of artistry and skill that it is, in some cases, impossible to tell it from their tapestry work (which is structural design), unless examined under a pick glass. And even then, some specimens are problems for an expert.

Types of Designs.—Let us consider the designs themselves. What is a design? Look again at your sample of damask. There you may see a rose and its leaves represented in very much the same way that it appears in nature. A special arrangement of that rose and its leaves is presented again and again throughout the fabric. The fabric and the design are white; the outline of the rose and leaves is produced by the difference in the weave areas. When you have grasped these three very simple facts about your damask design, you have grasped the three principal elements of design: color, composition, and line. A design need not have all three; it may have line and composition, like the damask, or it may have color and composition, like a tie-dye scarf. Composition is the key word. The arrangement of lines and colors to form a satisfying whole is *design*.

There are all kinds of designs. Visit the Metropolitan Museum of Art and look at the designs on Peruvian textiles, Chinese brocades, and French eighteenth-century silks. Or go to the piece goods department in a department store for illustrations. Write a short report on the various kinds of designs that you saw. *For example:* On a recent visit to a store, I saw a cotton print with a navy blue background upon which

a white sailboat was printed. It was not a perfect reproduction of a sailboat, but merely a sketchy outline which suggested a sailboat. *Or:* At the Museum you will see a Japanese silk kimono upon which there are embroidered flowers in full bloom. These flowers copy nature very closely.

Activity

Collect at least five pieces of fabrics and write the descriptions of what you see.

THREE CLASSES OF DESIGNS.—Apart from the fact that they are either structural or surface designs, what distinguishes these designs? If each design were on a piece of paper instead of a fabric, what observations could you make? They have endless variety, as you must have noticed. There are almost as many designs as there are people who have the imagination and the craftsmanship to create them. But they may be divided for purposes of study into three classes, naturalistic, conventionalized, and abstract. A *naturalistic design* copies things as they actually are; for example, the flowers on the Japanese kimono. A *conventionalized design* takes actual things and distorts them for its own purpose, as in the case of the cotton sailboat print. An *abstract design* represents no real object, but takes forms and lines and combines them to make a pattern. This type of design is also called a geometric design and is illustrated by a plaid woolen cloth or a polka-dot silk.

Naturalistic designs are to be found in Japanese and Chinese fabrics. Here they reached the acmê of perfection. They are seldom used on textiles today, since our taste runs more to the conventionalized and the abstract designs. These are less conspicuous and considered more suitable for modern styles of dress and home furnishings.

Requirements of a Good Design.—Let us select a fabric design which pleases us. Why is it beautiful? We have seen that the underlying elements of any design are color, line, and composition. Now we must go into this matter a little more deeply. We realize that any lines arranged haphazardly on

the surface of a cloth do not make an attractive pattern. They must be properly spaced so as to break up the surface in an interesting way. There must be some repetition of line or parts of the motif in a way that has meaning—rhythm. And the whole design must be well related in its parts—harmony. The composition should be balanced either directly or indirectly. A design that is alike on both sides of an imaginary line passing through the center is formal, conveys the impression of dignity, and is called bi-symmetrical. Indirect balance means that the areas are not similar, but that the mass of the design is distributed so that they balance. The indirect design will be found more difficult to plan, but it is more attractive.

Motifs Used in Design.—Geometrical forms naturally convey a meaning based upon their association in nature. The triangle is found in nature as the shape of crystalline substance, hence represents force and strength. The curve, on the other hand, represents the cross-section of plants, suggesting delicacy or softness. Between these two limits, the triangle and the circle, we find squares, polygons, etc., all of which represent the shades of difference between the strength of the triangle and the softness of the circle.

In a similar manner, lines of various kinds convey distinct meanings. Straight lines represent severity, while the curved line has a feeling of softness. Vertical and horizontal lines run in different directions, and when they meet they convey the meaning of opposition or neutralization.

The sense of good design, however, cannot be acquired by reading this or any other book. You must see and study good designs themselves, either by use of pictures or, better still, by handling and studying the fabrics themselves.

Forms of Fabric Surface Decoration.—The principal forms of surface decorations are: (1) embroidery, (2) quilting, (3) surface finishes, (4) modern imitation of hand processes, and (5) dyeing and printing both by hand by machine.

Embroidery

Historic Facts.—Embroidery covers all forms of decorative stitches worked with a needle upon the surface of a woven fabric. The ancient civilizations of Persia, Turkey, India, and China developed this art to an extraordinary degree of excellence. As civilization moved westward it was transplanted into Europe. In medieval times, embroidering was the chief occupation of the women of all ranks, from the palace to the cloister, and sharp rivalry existed in the production of sacerdotal vestments and ornaments. Nuns embroidered robes adorned with sacred subjects; girls produced admirable embroidery in appropriate designs for the monasteries; chasubles* and mantles were embroidered on silk, embellished with gold and gems, by the fair hands of queens and princesses. From the ninth to the fifteenth century was a glorious period for needlework. During this time the characteristic designs were figures and portraits, floral designs, rococo and arabesque ornamentations. The designs were elaborate (arabesque) and wrought with gold and silver upon magnificent fabrics.

Classification.—Embroidery may be classified as follows: (1) that described above, in which Persia, China, and Japan are the greatest masters of modern times; and (2) white, or flat-stitched embroidery applied to dress and home furnishings. St. Gall, Switzerland, has been the center of the flat-stitch embroidery industry of the world for the past one hundred years.

Embroidery as produced today, either by hand or power machine, is an important form of surface decoration. Although embroidery in its original form was done by hand, most of the embroidery in America at the present time is executed quickly by machine. One form of machine embroidery is done on the Bonaz sewing machine. This machine will produce involved patterns on dress fabrics, curtains, and home furnishings. Russian, Czechoslovakian, Tyrolean, and Norwegian peasant hand-embroidery are featured by stylists at various times.

* Chasuble is the outer vestment with cross marked on bands which the priest wears at mass.

Applied Surface Decoration

Decorative Stitches.—Cross-stitch, the most common of the decorative stitches, is formed by placing two oblique stitches, one across the other, with crossing in the middle. The method followed in the beautiful old embroideries, from which are derived many of our best inspirations, was by counting the threads of the fabric. The modern method uses stamped patterns which, while quicker, are less accurate since, in stamping the design, care is not taken in following the grain of the fabric. For other decorative stitches consult Chapters 12 and 13.

Open-Work Embroidery.—In Renaissance embroidery, the design and the connecting bars are worked with the buttonhole stitch without picots. The background between the stitches is removed.

Richelieu Embroidery.—This is similar to the Renaissance except that the outside edge of the buttonhole stitch and the bars are decorated with picots.

Swedish Weaving.—Filling threads are removed from the fabric and these are replaced by a design woven over the remaining threads of fabric. Many beautiful and intricate designs are possible.

Hardanger (Norwegian).—In this type the outlines are worked with a flat stitch over the thread of fabric, then the threads between are cut to form the open-work part of the design.

Hedebro.—Danish peasants decorate their personal and household linens with an elaborate open-work embroidery.

Many of these embroideries are popular in the countries in which they originated, and while still carried on there, they are difficult to execute and require time to do.

French Embroidery.—This is one of the simplest to execute. It is distinguished by its raised effect which is secured by an underpadding, over which is worked the looped or buttonhole stitch and the satin stitch.

French embroidery uses satin and stem stitch mainly with a padding underneath. The satin stitch is used in a design with small surfaces which are to be covered with embroidery. Padding must be carefully done. The outline, the chain stitch, and running stitch are all used. The running stitch should be made with a long stitch and a small space in order to keep all the thread possible on top. The chain and outline stitch will cover the space quickly. The padding stitches must be made lengthwise and kept within the design, otherwise in covering with the satin stitches later the design might become enlarged.

Tapestry and Crewel Embroidery.—These are of very ancient origin, since they were introduced almost as early as the woven tapestry. The stitches of different lengths are executed on counted threads and the effect is very colorful. Crewel work has always been a favorite type of embroidery, especially so-called needle-point which came into prominence a little later than tapestry embroidery. The designs are pictorial or floral and are worked with the half cross-stitch. The finest needle-point, where the design is covered with small stitches, is known as *petit point*. The larger stitches used for the background are called *gros point*. The canvas for needle-point comes with its intricate design already worked in groups of lovely coloring, leaving only the background to be filled in.

Quilting

Quilting was a popular art in the eighteenth century and was used extensively in England during this period for decorating garments and bed covers. It was carried by the colonists to America where it has been popular ever since. At present it is in vogue for collars and evening wraps.

In rural sections today, such as the southern mountain districts and small New England communities, church aid societies quilt as a means of raising money. Many excellent quilts are shown at hobby and antique exhibits. Quilting contests are still held as a means of reviving handicrafts.

Technique.—The correct way to quilt is to have a large frame into which the whole quilt or coverlet is stretched. The stitches used are small running stitches and are taken through three thicknesses of material, the pieced quilt, wool or cotton bat, and the lining. This is difficult, especially as one layer is a heavy cotton fabric. It is also difficult to manage because one hand is kept under the quilt, while the other hand manipulates the stitches. There is another type of quilting called "trapunto." In this the fine running stitches are worked from the wrong side upon the design which has been stamped on cotton flannel. After the design has been worked with running stitches, the parts to be raised are filled in with soft wool, or if the raised part is a line design, a tapestry needle is threaded with rug yarn or three strands of Germantown wool. This is drawn through the double line of quilting, which raises the design into strong relief against the background.

Crazy Quilts.—The design of a crazy quilt interprets in a modern medium the spirit of a truly American heirloom. Like so many beautiful objects, it had its origin in necessity. Quilts were made by the earliest settlers to cover their beds and to hang over the doors and windows in their rude houses against the cold, sharp, winter nights.

Bright as banners, they were carried along by pioneers from Connecticut to Western Reserve, from Virginia to Kentucky, Illinois, and Kansas, over the Santa Fe and Oregon Trails, and at last across the Sierras to the Pacific. The very names of these early quilts—Log Cabin, Road to California, Prairie Lily, Clay's Choice, Lincoln's Platform—tell the romantic story of the conquest of a continent.

At first, gaudy scraps salvaged from cast-off clothing were pieced together "crazy fashion" with brilliant yarns and attached to a back with an interlining. Later, as the country expanded and prospered, silk and velvet patches often replaced homelier wool and cotton, embroidery and appliqué were introduced, and elaborate designs evolved. One famous quilt was made of no less than 3,000 pieces.

Today quilts are once again high fashion. All over the

country attics are being ransacked for old family pieces whose patchwork was the product of great-great-grandmother's patient fingers. The art of quilting itself survives in many an old house of New England and the South, in the remote mountains of Tennessee, on the farms of the middle west, and even in far-off Alaska.

Tufting

Tufting has been used extensively for the decoration of bedspreads. This is a type of loop in which a heavy, soft cotton is applied to a material, usually a heavy unbleached muslin, but recently finer cotton fabrics have been used. The loops are cut, leaving tufts wherever called for in the design. The more expensive spreads are elaborately tufted and the designs are excellent. Many tufted bedspreads are now made by machine. It is, however, possible to secure the hand-made spreads.

Dyeing and Finishing Processes

Surface Designs by Means of Dyeing and Finishing Processes.—We have listed briefly some of the effects achieved by dyeing and finishing processes in surface designs. Now we shall give this matter more special attention. We shall see how an uninteresting piece of plain-weave cloth can be transformed into a fabric of exquisite beauty by the magic of skillful dyeing and finishing. To illustrate:

(a) **BLEACHING.**—A dazzling whiteness may be imparted to fabrics by proper bleaching agents.

(b) **MERCERIZATION.**—Fabrics may be given various degrees of luster by mercerization, starching, pressing, etc.

(c) **SHEARING.**—They may be sheared or singed for additional smartness.

(d) **NAPPING.**—A fuzzy piled effect can be obtained by napping.

(e) **SIZING.**—Any desired stiffness is achieved by the addition of sizing agents.

(f) **PLISSE.**—A crinkled effect is produced by printing a resist gum, usually in stripes, on those parts of the fabric which are not to

show this finish. The fabric is then dipped in a caustic soda bath which shrinks those parts not covered by the resist gum. This is a permanent finish unless it is ironed. Ironing will destroy the effect.

(g) CHASING.—This makes a “thready” appearance and is used mainly in coarse yarn cottons and as sheetings and Osnaburgs. This, together with the luster produced on both sides of the fabric, gives the cloth a lined-like appearance. In the finer cloths, such as broad-cloths and poplins, a very high surface luster is obtained. The process consists of passing the goods through the nips of three calender rolls, and then around guide rollers and back through the same nips again. Two or more layers of cloth are therefore passing through the nips at the same time, causing a friction which produces a luster on both sides of the fabrics at the same time. This finish is very often used in addition to mercerization. In comparing chasing with mercerization, although the latter is a permanent finish, it has deep-seated luster and not so much of a surface luster. Chased finishes are not permanent but have more surface luster.

(h) MOIRÉ.—Watered effects, called moiré, are produced on fabrics to give them a variety of shades. This transition from light to dull tones in the same fabric lends a luxurious surface beauty.

(i) MISCELLANEOUS.—Dotted swiss may be imitated by dots applied in the form of paste. In a cheap process the dots frequently crack or disappear altogether. But in certain high-class French fabrics, painted figures and dots are used which withstand even dry-cleaning.

Dyeing and Printing.—When a fabric or a fiber is impregnated with a uniform color over its whole surface, it is said to be dyed. In distinct patterns or designs in which one or more colors have been impressed upon it, it is said to be printed. Both dyeing and printing are now done successfully and beautifully by modern processes. Originally they were hand-processed and their history goes back to ancient times.

Probably the earliest form of colored design on fabrics was produced by painting the design on the surface of the cloth. Printed designs, today, are placed on the cloth by means of copper rollers. The dye paste, a mixture of dye and starch, is impressed on the fabric by means of the etched design on the rollers. Each color requires a separate roller with the portion of the design in that color etched on the roller. This is called “direct” or “roller” printing.

Block Printing.—An ancient color art, which is practiced in much the same manner as centuries ago, is block printing. Beautiful effects are secured by stamping the design on fabrics by means of a design carved by hand on a wood block. The block is dipped into a color paste and then pressed firmly on the cloth. Each color must be applied separately and allowed to dry before applying another color. The fabric must be stretched smoothly and securely fastened on edges by pins. Pin marks on fabrics indicate true hand-blocking.

Stencil Dyeing.—This is a method of decorating cloth which is, strictly speaking, neither stenciling nor dyeing, but rather a combination of the two. It is not used in the domestic industry, and is in little use elsewhere outside of Japan. In the system used in Japan the design is first cut in a series of paper stencils which are smeared with rice paste. A bolt of cloth is then folded over and another stencil placed on it, and so on until the entire length has been folded back and forth, with stencils of the same pattern between each fold and exactly over one another. This bundle is placed in the hand press and screwed down tightly. Then indigo dye in liquid form is forced through the bundle from top to bottom by means of an air pump. As the cloth and stencils are closely compressed by the screw of the press, the dye goes through the cloth layers only where there are openings in the stencils. When taken from the press and the stencils removed, the cloth is found impressed with a long series of patterns of the same design. Two or three colors are often used, the process being repeated for each color and applied through a different set of stencils.

The Batik Method.—This is a method of resist dyeing originally used by the natives of the Dutch East Indies. Upon a piece of linen various designs are outlined with a pencil, and when the design is completed, the parts that have been ornamented are stiffened with liquid preparation. The unornamented parts are then dyed the desired color. After ornamentation and dyeing, the entire fabric is boiled in water

and benzine or kerosene. The dyed parts retain the dye and the formerly stiffened parts remain the color of the original fabric. After the first bath, the cloth is dried and the wax is removed by washing it in hot water and benzine or kerosene. Wax is again applied to such parts of the design as are to be left free from the second dye bath. The process is thus repeated until the design is entirely developed through the various color applications. This method is also adapted to use on velvet, silk, and leather. The Dutch introduced its use in Europe, whence it came to the United States.

Tie Dyeing.—Bandanna fabrics are made by the tie and dye method in which the cloth is tied in knots at certain places to prevent the parts from receiving the dye. This method is a very remarkable means of producing designs in spots, round, oval, or square plaids.

Dye liquor will penetrate a fabric in inverse proportion to the twist of the knot. That is, if the fabric is tied in a knot, the dye liquor will penetrate to a certain degree the whole knot, but will penetrate the outside more than the inside. This causes a gradation of color, forming designs.

QUESTIONS

1. Explain how fabric decoration originated.
2. (a) What are the two main groups of fabric decoration?
(b) Compare them in fabric, design, finish, and cost of production.
(c) Illustrate by use of fabrics.
3. Outline the historical development of fabric decoration.
4. Give examples of the attempt to imitate and cheapen surface decoration.
5. (a) How can one who is beginning the study of fabric decoration extend his knowledge? (b) Where can he look for inspiration?
6. Explain the importance of knowing how to analyze surface design.
7. Name three underlying elements of design. Illustrate by reference to special fabrics.
8. (a) List three classes of design found in textile decoration.
(b) Describe each with illustrations or sketches showing its application.

9. Explain why the principles of design must be considered in order to make an attractive design.
10. Illustrate by sketches or by a textile fabric how lines can convey distinct meanings.
11. How can you become acquainted and learn to enjoy good design?
12. State the principal forms of surface decoration.
13. Outline briefly the historical facts of embroidery.
14. Make a study of peasant embroidery either illustrating or describing the distinguishing features of each.
15. Distinguish between the two classes of embroidery, giving examples of each.
16. Explain the popularity of needle-point.
17. List some special or national varieties of embroideries featured in foreign countries.
18. Explain how peasant or national embroideries can be readily recognized.
19. Write a short description of quilting, giving its origin and method of working.
20. Distinguish between quilting and trapunto quilting.
21. Describe the crazy quilt as made by pioneer women.
22. List a few of the patchwork quilts by name, giving the meaning of each.
23. Explain what is meant by tufting.
24. Discuss how dyeing has been used as a means of surface decoration.
25. What is meant by the following terms: (a) plisse, (b) chas-ing, (c) moiré as applied to textiles?
26. How did primitive people decorate their fabrics?
27. Describe the process of block printing.
28. Tell how stencils are made and used.
29. Explain how articles are decorated by the batik method.
30. Describe the different effects that may be secured by tie dyeing.

REFERENCES

- Bals, W. L. In *Old Egypt*. G. J. Manz.
- Bertram and Edwards. *Home Life in France*. Methuen & Co., Ltd.
- Denny, Grace. *Fabrics and How to Know Them*. J. B. Lippincott Co.
- Dillmont, Thérèse de. *Encyclopedia of Needlework*. Dollfus Meig and Co. D.C.M., Library Charles Scribner's Sons.
- Dooley, William H. *Clothing and Style*. D. C. Heath & Co.
- Dooley, William H. *Textiles*. D. C. Heath & Co.

- Earle, Alice M. *Home Life in Colonial Days.* The Macmillan Co.
 Finley, Ruth E. *Old Patchwork Quilts.* J. B. Lippincott Co.
 Gibbs, Charlotte M. *Household Textiles.* M. Barrows & Co.
 Glazier, R. *Historic Textile Fabrics.* Charles Scribner's Sons.
 Hall, Eliza C. *A Book of Hand-Woven Coverlets.* Little, Brown & Co.
 Hess, Katherine P. *Textile Fibres and Their Use.* J. B. Lippincott Co.
 Little, Frances. *Early American Textiles.* D. Appleton-Century Co.
 Mann, Kathleen, and Corbin, J. A. *Peasant Costume in Europe.* The Macmillan Co.
 McKim, Mrs. Ruby Short. *One Hundred and One Patchwork Patterns.* McKim Studios, Independence, Mo.
 Morgan, Adalene B. *Elements of Art and Decoration.* Bruce Publishing Co.
 Small, Cassie. *How to Know Textiles.* Ginn & Co.

PART II

CHAPTER 9

COMPARATIVE STUDY OF FABRICS—EMPHASIS ON TEXTURE AND EFFECTS OF DYES

In making a comparative study of fabrics, it is necessary not only to make a comparison of their qualities, but also to go back and see the contributing factors that cause these differences.

We have discussed cotton, rayon, linen, wool, and silk in *Attractive Clothes*, Chapters 5 and 9. In this chapter we shall summarize the characteristics of fabrics and processes.

Fibers

Properties of Fibers.—We saw in previous pages that the value of feel or finish (called texture) of any fabric depends primarily upon the individual fibers which compose it. The characteristics (properties) and structure of the fiber make the characteristics of the cloth. Therefore, the first thing we should know about a fabric is the nature of the individual fibers. Some fibers cannot be spun and woven into cloth, such as kapok and hair. They are too short or too smooth and cannot be drawn out and twisted like wool or cotton.

In addition, the value of any fiber for textile purposes depends upon the possession of such qualities as power of absorbing moisture, reaction to cleansing agents, ability to conduct heat, fineness of luster, structure, affinity for dyestuffs, feel and beauty, felting (power), length, curl, softness, elasticity, etc., which adapt it for drawing out and twisting (called carding and spinning), and for other purposes for clothing.

Fineness is the quality some fibers have by being very small in diameter and exceptional in length, making them capable of being spun into fine thread or yarn. Silk is very fine, because it possesses length and strength which allows it to be worked into a fine thread.

Structure is the formation of the fiber. Some fibers, like those of wool, have a very scaly formation which allows it to felt (shrink) and to be used for heavy, fuzzy fabrics. Silk and wool attract dyestuffs more strongly than cotton and linen; hence, silk and wool fabrics are said to be faster than jute, cotton, and linen fabrics.

Feel or *texture* is the term used to express the sensation one receives on touching a fiber or fabric. Some fabrics, like lawn and velvet, have a better feel than other fabrics. *Luster* is the power a fiber or fabric has of reflecting light. Some fibers, like silk and rayon, have high reflecting power, while cotton is porous and does not reflect light very much. Silk ranks far above cotton in luster. *Beauty* is the effect of those qualities of fabrics which appeal to the eye, and causes the pleasant sensation one receives when looking at a fabric. Silk has greater beauty than cotton. *Felting* is the power a fiber or fabric of wool has of contracting when exposed to heat, friction, moisture, and soap.

Firmness is the ability to resist being crushed under pressure. For example, a fiber that is easily crushed or distorted is not serviceable. A fiber must be over a half-inch long in order to be spun into yarn. Certain fibers, like forms of kapok, would be very desirable for cloth if they were not too short for spinning. *Curl* is the natural ability of the fiber to assume beautiful wavy positions. Certain wools are naturally curly and can be used in making artificial fur or curly overcoating. *Softness* is the property of a fiber that yields to pressure. Lamb's wool is especially soft and is used for babies' coverings. *Elasticity* is the power of a fiber, when pulled, to return to its original position. It is very desirable that fibers should be elastic so as to conform to the shape of the body. Silk is more elastic than cotton, hence silk hosiery clings to the ankle better than cotton.

Absorption means the power to hold moisture and to give it off gradually. Linen has greater absorbing power than cotton; therefore linen makes a better towel than cotton. The ability of a fabric, like cotton, to withstand the action of soap,

water, and friction is very important. Cotton, for example, is very useful because it can be easily cleaned. Some fabrics, like linen, feel cool to the touch because they allow the heat to pass from the body, hence the cool sensation. On the other hand, some fibers, like wool and silk, feel warm to the touch because they do not readily conduct the heat from the body.

The *shape* and *smoothness* of fibers is very important because smooth fibers reflect the light, which gives them luster, while porous or uneven fibers reflect unevenly and cause the fiber to appear dull. The shape is determined by microscopic examination. (Fig. 116.)

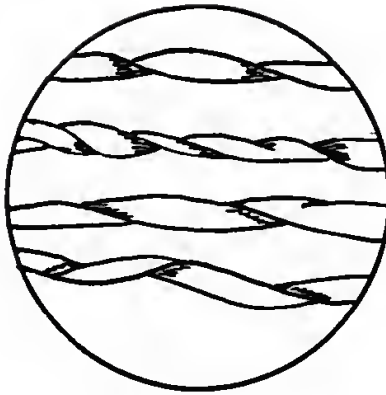
Fabrics with metallic threads have a wiry feel.

While we read about the fibers, think of the principles of biology that have produced these fibers—to serve the plant or animal in some way—and how the qualities of the fibers have been influenced by environment.

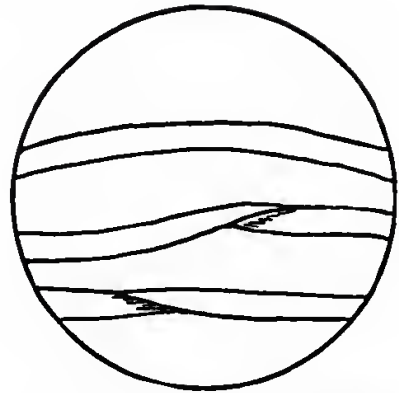
Other Fibers.—There are other fibers, such as alpaca, horsehair, and camel's wool, that are used in clothing. Mohair and alpaca are fibers obtained from goats. Both fibers are stiff and lustrous, although mohair is more so than alpaca. Because mohair is stiff, smooth, and has a luster, it is adapted for pile fabrics and those that do not require frequent cleaning. It is not adapted for soft, clinging lines and styles.

Horsehair is very stiff and is used for stiffening in the underlining of coats. Camel's wool is very warm and light, hence it makes a fine, soft, light-weight, dressy fabric with a glossy, slightly hairy finish.

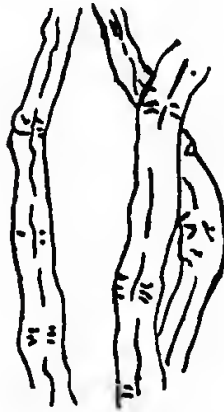
TINSEL.—This term has long been used to denote a metallic substance, used in strips or threads for any purpose in which a sparkling effect is desired without much cost. Tinsel thread is produced in a great number of ornamental styles, both flat and round, and in all colors and shades, though usually in imitation of gold or silver. It is largely used in the production of novelty dress trimmings, braids, and cords, and for making various kinds of thread used in artistic needlework. Lamé is a metal cloth.



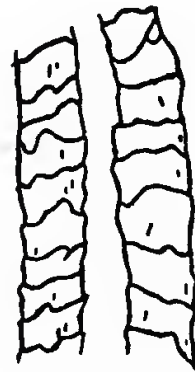
a. Cotton fibers



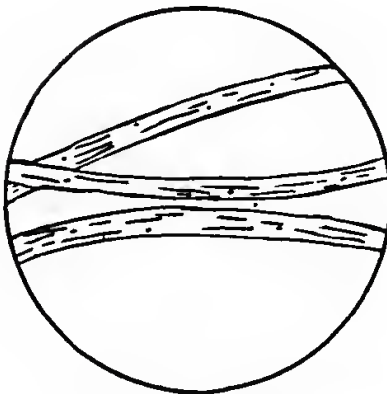
b. Mercerized cotton fibers



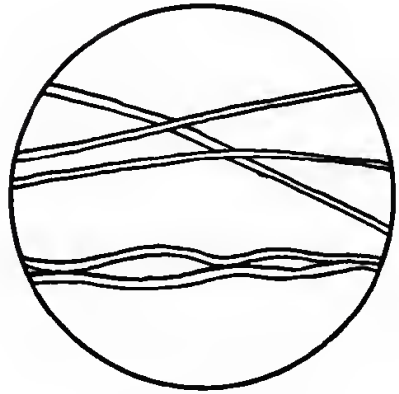
c. Linen fibers



d. Wool



e. Rayon fibers



f. Silk fibers

FIG. 116. Microscopic Appearances of Fibers

Characteristics of Fibers Summarized.—The following list covers eleven qualities applied to various types of fibers.

SUMMARY OF QUALITIES OF FIBERS

1. MAJOR TEXTILE FIBERS—SOURCES:

- a. Animal—wool, worsted, silk.
- b. Vegetable—cotton, linen.
- c. Chemical or synthetic:
 - Rayons— (1) Viscose.
 - (2) Cuprammonium or Bemberg.
 - (3) Nitro-cellulose, Chardonnet
or Tubize Chatillon.
 - Acetates—(1) Celanese.
 - (2) Du Pont Acele.

2. MICROSCOPIC APPEARANCE:

- a. Wool—fiber made of overlapping scales which vary with the several grades of wool. Waves or serrations run from 600 to 3,000 to the inch. Structure compared to asparagus tip or fish scales.
- b. Worsted—the choice fibers taken from wool that have suitable lengths.
- c. Silk—cylindrical and spoken of as having no structure.
- d. Cotton—flat, ribbon-like fiber that has spiral twist. Has from 150 to 300 turns of natural twist per inch under microscope.
- e. Linen—rather cylindrical with joints interspersed throughout fiber, called nodes. Pointed at the ends.
- f. Rayon—generally straight, smooth. Each kind of rayon has special characteristics.
- g. Acetate—narrow grooves.

3. FEEL:

- a. Wool and worsted—warm, springy, elastic; may be harsh.
- b. Silk—smooth, soft, elastic, strong.
- c. Cotton—soft, cool, lifeless.
- d. Linen—cool, stiff, tough, strong.
- e. Synthetic fibers—smooth, slippery, heavy.

4. LENGTH:

- a. Wool—short wool is from 1 to 6 inches; long wool from 1 to 12 inches.
- b. Worsted—from $1\frac{1}{2}$ to 6 inches.
- c. Silk—from 300 to 1,400 yards, continuous.
- d. Cotton—from $\frac{1}{2}$ to $2\frac{1}{2}$ inches long, with choice stock from $\frac{3}{4}$ to $1\frac{1}{2}$ inches.

- e. Linen—from a few inches up to about 36 inches.
- f. Synthetic fibers—indefinite. Skeins average about 3,000 yards. Daily production of a single thread uninterrupted may run from 3,000 to 8,000 yards.

5. STRENGTH:

- a. Wool—weakest of all major fibers.
- b. Worsted—stronger than wool but weaker than other major fibers.
- c. Silk—strongest fiber of all.
- d. Cotton—weaker than linen and silk; stronger than wool and worsted.
- e. Linen—next to silk in strength.
- f. Synthetic fibers—of good strength, generally speaking. About one-third to one-half as strong as silk.

6. ABILITY TO CONDUCT HEAT:

- a. Wool and worsted—poorest of all major fibers. They hold the heat.
- b. Silk—next to wool.
- c. Cotton—next to linen in conducting heat. Makes for coolness.
- d. Linen—coolest fiber of all; the best conductor.
- e. Synthetic fibers—they are all good conductors of heat.

7. ABSORPTION PROPERTIES:

- a. Wool and worsted—absorb and evaporate quickly.
- b. Silk—same as wool.
- c. Cotton—absorbs quickly; evaporates more slowly.
- d. Linen—absorbs and evaporates quickly.
- e. Rayons—absorb quickly and evaporate slowly.
- f. Acetate—does not absorb readily and dries readily.

8. MOISTURE CONTENT:

- a. Wool—16%.
- b. Worsted—13% to 18%.
- c. Silk—11%.
- d. Cotton—7%.
- e. Linen—8½%.
- f. Rayons—11%.
- g. Acetate—6.5%.

9. ELASTICITY:

- a. Wool—greatest elasticity.
- b. Worsted—next to wool in greatest elasticity.
- c. Silk—next to worsted.
- d. Cotton—follows silk in elasticity.

- e. Linen—follows cotton in elasticity.
- f. Synthetic fibers—vary somewhat and not definitely standard.

10. FINENESS:

- a. Wool and worsted—coarsest of all major fibers.
- b. Silk—finest textile fiber of all.
- c. Cotton—next to silk in fineness.
- d. Linen—may be rather coarse or fine; varies considerably.
- e. Synthetic fibers—may be fine or coarse. Truly fine sizes of filaments are finer than the finer cottons.

11. CLEANLINESS:

- a. Wool and worsted—poorest of all; wool poorer than worsted.
- b. Silk—cleanest of all fibers.
- c. Cotton—cleaner than wool and worsted.
- d. Linen—cleaner than cotton but not as clean as synthetic fibers or silk.
- e. Synthetic fibers—rank next to silk in cleanliness.

A knowledge of the special characteristics of the various classes of textiles is very useful to one engaged in the designing and manufacturing of clothing, as the use and style of the costume depend upon the manipulation of the fibers and yarn into the cloth and the cloth into the garment.

The qualities of fabrics are due not only to the nature of the fibers but also to the manufacturing processes they pass through in being made into fabrics:

- (a) Carding, spinning, throwing or pressing (felting).
- (b) The weaving or other processes that make the structure.
- (c) The finishing, including the coloring—dyeing.

Process of Manufacture.—There are five general steps in the preparation of fibers for cloth: (1) cleaning of the fiber; (2) forming the fiber into a continuous rope or strand; (3) reducing the size of the strand and twisting the resulting strand into the desired thickness, shape, and twist, called yarn; (4) forming the yarn into a system of parallel lengths called the warp, the foundation of the cloth; and (5) interlacing the warp with another thread or yarn to form the cloth, called weaving.

The process of making the yarn is carding, sometimes combing if worsted or fine cotton yarns are desired, and drawing out and twisting the carded fibers, called spinning. In the case of long filament (fiber) rayon, and long filament (fiber) silk, the process is doubling and twisting, called throwing.

While the processes of carding and spinning are quite similar for cotton, wool, and worsted, the machinery for doing the work is different and provides for differences in characteristics in the yarns. For example, short fiber rayons may be spun on cotton, worsted, or wool machines and the final spun yarn will resemble wool if spun on wool spinning machinery, worsted if spun on worsted machinery, and cotton if spun on cotton machinery. The spun rayon yarn is combined with cotton if spun on cotton machinery, and woolen yarn if spun on wool machinery, and worsted if spun on worsted machinery.

Strength of Yarn.—The strength and fineness of yarn or thread is due to the length of the fibers and number of turns or twists to an inch. The longer the staple, the longer the yarn which can be made from a given amount of fibers. The twist varies—may be in the direction of the hands of the clock called right-hand twist, or in opposite direction called left-hand twist. The twist varies from a few turns to a hundred turns per inch. The longer the fiber, the more twist can be placed in the yarn without kinks or roughening. A 2-ply yarn highly twisted, that is, with as many turns or twists to the inch as possible, woven closely together, will give a firm, stiff fabric that in the case of a worsted would hold its shape and be valuable for trousers or a suiting. A fabric composed of a single yarn not so tightly twisted or closely woven as in case of a worsted would be softer and adapted to women's suiting because it drapes better. On the other hand, fabrics with less twist are not so strong, but can be easily napped, and therefore adapted for overcoating or unfinished worsteds. Worsted fabrics have a larger diversity of weave designs than woolens.

The quality of cotton, worsted yarn, etc., may be improved by an additional operation of combing—passing the raw mate-

rial through a steel comb which makes all the fibers parallel and also enhances the evenness, smoothness, and luster of the yarn. (Fig. 117.) Hence it is used only for the better quality of cloth. Yarn may be increased in size and strength by doubling or trebling, producing what is called 2-ply or 3-ply yarn.¹

Mixtures.—Various fibers may be mixed in the raw state before they are made into yarn, called blending, or various kinds of yarn may be twisted together before they are woven into cloth.



FIG. 117. Difference Between Carded and Combed Yarn under the Magnifying Glass

Note the projecting fibers in the top yarn, which is only carded. The bottom yarn is combed. Note the smoothness.

COMBINATIONS OF WOOL, RAYON, AND COTTON.—Various combinations are given below.

1. *Wool and cotton* garments are less expensive than all wool, and are more easily laundered as the cotton lessens the shrinkage.

2. *Wool and silk* garments are soft and warm. They look and feel luxurious. The introduction of the silk overcomes the "scratch" of the wool. Silk reduces shrinkage, aids appearance, and gives a softer effect for comfort in wearing.

3. *Wool and rayon or cotton* combination produces a garment which looks like silk and wool, but is much less expensive. The introduction of rayon prevents the garment from turning yellow after repeated washing.

¹See *Clothing and Style*, D. C. Heath & Co.

4. *Angora and silk.* Angora is the hair from the angora rabbit. It adds extra warmth, and is soft and pliable. When combined with silk, angora has a luxurious appearance and feel.

5. *Cotton and rayon* garments are soft, have the appearance of silk, and are inexpensive.

Texture.—A word used frequently by costume drapers or designers in describing cloth is *texture*. It refers to the feel or finish and weave of the fabric—to the sensation we experience when we close our eyes and feel of a fabric. A fabric may be fuzzy, napped, stiff, fluffy, soft, etc. The texture is governed by the composition, the qualities of the individual fibers, and the twist of the yarn, weave, and finish.

The texture of a fabric also determines the degree of reflection of light. *To illustrate:* Satin reflects the light to the face, bringing out the lines and shadows; a dull, soft texture, like crepe de Chine, will not reflect as much, hence influences the degree of attractiveness of the coloring—dyestuff—on the fabric.

The texture of a fabric is also due to the finish, as described above and on pages 198-206 and 339-341 of *Attractive Clothes*.

The weave or structure of a fabric also influences the texture. There are four different structures: (a) woven, (b) knitted, (c) felted, and (d) plaited. For explanation of woven fabrics: (1) plain, (2) twill, and (3) sateen, with many variations, see pages 311-312. The knitted fabric (hosiery, etc.) has a soft and more elastic texture than the others. The felted, like a felt hat, has a firm, condensed form and may be made hard and stiff. The plaited, lace fabric has an open-work structure.

Dyes

Kinds of Dyes.—Coloring is placed on fabrics by dyeing and printing. (See Chapter 8 of this volume; also page 201, *Attractive Clothes*.) Colors are produced from dyestuffs. There are many classes of dyes. The following represent the important ones:

I. CLASSIFICATION:

- a. Natural dyes
- b. Synthetic organic coloring matters (coal tar dyes)
 - (1) Direct and developed dyes
 - (2) Acid dyes
 - (3) Basic dyes
 - (4) Sulphur dyes
 - (5) Mordant dyes
 - (6) Vat dyes
 - (7) Insoluble azo dyes
 - (8) Acetate rayon dyes
 - (9) Phthalic anhydride dyes

II. USES of each class of dyestuffs and the shades that can be produced

- a. Natural dyes are used on vegetable fibers (cotton) as well as on animal fibers (wool and silk). Generally speaking, they lend themselves only to the production of subdued shades. Logwood black on silk, however, is the bloomiest black obtainable on that fiber.
- b. Synthetic organic coloring matters:
 - (1) Direct dyes are principally used for the dyeing of vegetable fibers (cotton and rayon), also for silk and to some extent for wool. Practically all shades can be produced with the exception of the brightest.
 - (2) Acid dyes are principally used for the dyeing of wool, also for the dyeing of silk. Practically all shades can be produced with them.
 - (3) Basic dyes can be used on all textile fibers but require a mordant on the vegetable fibers. On the whole they are capable of producing the very brightest shades obtainable. However, their use on textiles is limited because of lack of fastness except where brightness of shade is prime consideration.
 - (4) Sulphur dyes are used for the dyeing of vegetable fibers (cotton and rayon). They lack brightness and there is no red sulphur dye in existence at present.
 - (5) Mordant dyes are used for the dyeing of wool. All but bright shades can be produced with them.
 - (6) Vat dyes are used for the dyeing of vegetable fibers, also to a certain extent for fast shades on silk and to a limited extent for the dyeing of wool. All but

the very brightest shades can be produced with them (somewhat limited in red shades).

- (7) Insoluble azo dyes are suitable for the dyeing of vegetable fibers. They are especially strong in red shades.
- (8) Acetate rayon dyes are suitable only for the dyeing of the cellulose acetate type of rayon. Practically all shades can be produced with them.
- (9) Phthalic anhydride dyes provide brilliant shades that may be used for evening gowns but they lack qualities of fastness.

These remarks as regards shades that can be produced with the various classes of dyes can be taken only in a general way and due allowance must be made for exception to the generalizations.

III. RELATIVE COST of shades produced with the different classes of dyes (starting with the least expensive):

<i>Vegetable fibers</i>	<i>Animal fibers</i>
Direct dyes	Acid dyes
Sulphur dyes	Chrome dyes
Fast to light direct dyes	Fast to light acid dyes
Insoluble azo dyes	
Vat dyes	

Generally speaking, it can be said that the cost increases with the fastness properties.

IV. It is not always possible to produce the same shade with different classes of dyestuffs.

Fastness.—Since the color is an important factor in a fabric or a costume, it follows that the dyes needed to produce the color determine in many cases the satisfaction obtained from the fabric or the costume. As outlined on the previous page, there are many kinds of dyes each with special properties. Some are fast to sunlight; others are not. Many are fast to washing; others are not. Whether or not they are “fast” is a matter which must be considered, but this term is often very loosely used. A dye that is really “fast” would remain permanently on a fiber under all conditions. No dye yet discovered will do this, and such permanency is not needed for ordinary purposes. On the other hand, it is essential that the dye last during the lifetime of the fiber and withstand the conditions under which the fabric is used, but not necessarily

to other conditions. For example, a curtain fabric need not be fast to perspiration, but to give satisfaction it should be fast to light. In fact, the conditions should always be stated when fastness is mentioned.

Fading.—If the dyestuff does not hold or act on the material chemically, to the extent of remaining during the life of the material while it is being used and cleaned, it will gradually dissolve and cause the material to appear a lighter shade. The process of the coloring dissolving from the material is called fading.

On the other hand, if the color remains in the same or nearly the same state during the life of the material, it is said to be fast (1) to that type of material; (2) to the conditions under which the material is used and cleaned.

Experiments.—The following experiments will illustrate how the various fabrics may be dyed on an estimating basis.

Experiment 1—Dyeing Wool

Apparatus: Large porcelain dish or casserole, filter.
Materials: Undyed piece of woolen and worsted fabric.
Reference: Page 255.

Directions

1. Prepare a solution of coloring matter by dissolving a half-ounce of diamond dye (green or red) in a quart of water. Filter the solution. Place a piece of white woolen cloth in the liquid and boil 10 minutes. Then wash the dyed fabric and notice whether the dyestuff washes off or not.

2. Repeat the experiment, using the same weight of undyed woolen yarn. Repeat with worsted yarn.

3. Notice which has the deeper color. The degree of color depends on the amount of twist in yarn. Which sample has absorbed the greatest amount of dyestuff from the liquid? (a) Why is a yarn-dyed fabric faster than a piece-dyed? (b) Why is a raw stock-dyed fabric better than piece- or yarn-dyed?

Experiment 2—Dyeing Cotton

Apparatus: Large porcelain dish or casserole, filter.
Material: Piece of cotton cloth.
Reference: Page 255.

Directions

1. Prepare a solution of coloring matter by dissolving a half-ounce of logwood in a quart of water. Filter the solution. Place a piece of cotton cloth in the liquid and boil 10 minutes. Then wash the dyed fabric and notice whether the dyestuff washes off or not.

2. Repeat the same experiment and use a piece of cotton cloth that has been previously washed in common alum. Note the effect. Which has the greater attraction for dyestuffs, cotton or wool? Why is alum used?

3. Repeat the same experiment, using first the same weight of cotton yarn and then the same weight of cotton sliver. Notice the results.

Which piece of cotton holds the dye best, that which was dipped in alum or the one that was simply boiled in the solution?

Alum in this case is called a mordant, which is a substance that will impregnate the cloth with something which will hold the coloring matter. Other mordants are oxides, hydroxides, and basic salts of aluminum, iron, tin, and chromium.

Experiment 3—Dyeing Silk

Apparatus: Porcelain dish, filter stand, etc.

Material: Piece of silk yarn.

Reference: Page 255.

Directions

1. Prepare a solution of coloring matter by dissolving a half-ounce of logwood in a quart of water. Filter the solution. Place a piece of silk skein in the liquid and boil 10 minutes. Then wash the dyed silk and notice whether the dyestuff washes off or not.

2. Repeat the same experiment using the same weight of silk yarn without weighing it. Compare the results.

Textile Printing

In Chapter 8 we mentioned briefly textile printing. Printed fabrics such as print cloths can generally be distinguished by observing the back of the cloth. If the figure or pattern on the face of the cloth does not penetrate through to the back, but only shows the outline, the fabric has been printed. Fabrics are printed by coming into contact with rotating rollers on which the pattern is engraved.

Textile printing is one of the most important textile finishing operations. The direct method consists in printing a design in colors on either the cloth or the warp. The cost of printing varies with the size and the number of colors involved. It is necessary to know the steps in textile printing in order to appreciate and to explain intelligently the selling points of different fabrics.

Artists' Designs.—Printed designs are made by artists who are skilled in designing and have a knowledge of the harmony of colors, that is, colors that blend well. The design may be a simple geometrical figure, as a square or circle, or it may be a very elaborate design portraying some historical event, or a reproduction of some bird, animal, or scene. This design is made in the size and colors desired.

The artist's design is sent to the printing plant, where it is transferred to cross-sectional paper by an engraving artist. In doing this transferring, the design is magnified from 3 to 25 times by a camera device and is projected on a table. The object of magnifying is to bring out the fine details of the design, as, for example, the structure of a flower. The enlarged drawing is reproduced on the copper roller by means of a special device called a pantograph.

Direct or Roller Printing.—Most textile goods are today machine-printed. The design is engraved or etched on copper cylinders, one cylinder for each color; the color, thickened with gum, is supplied by rolls running against the cylinders, and the surplus is scraped off by a knife blade, leaving only that in the engraving which is taken up by the cloth. After printing, the cloth is steamed to set the colors, and then washed in order to remove the gum used to thicken the colors for printing.

Block Printing.—Block printing, as distinguished from machine work, is done by hand today in much the same manner as it was in Europe a century or more ago. All of one color or shade in the design is printed with one engraved wood block; or, if the design is large, there may be more blocks

for a color, each block printing a section of the design. Large spaces may be "felted" to carry more color. Sometimes brass edgings are inserted to produce fine lines. The fabric is laid out on long, padded, heavily built tables. These are on solid foundations because of the pressure and pounding necessary in this work.

The block printer goes the entire length of the table applying one color, and follows this entire length with each color in succession, the blocks being applied by hand first to the color pad, and then to the fabric. The pad is moved along close to the printer. Often each application of a color, especially where it covers the larger spaces, requires several poundings with a heavy mallet to insure satisfactory depth and smoothness of color. For larger spots of color it is often found necessary to make a second application in order to supply enough color.

Other Methods of Printing.—Other methods of printing are given below.

RESIST METHOD.—Examine a piece of foulard and note that the design is white on a colored background. This type of cloth is printed by the resist method, as follows: The fabric is printed by rollers with a gum preparation, then dyed. The dye liquor penetrates every part of the cloth except where the wax is located. Then the colors are set and the gum is removed, leaving the white design on a colored background.

DISCHARGE PRINTING.—Discharge printing is also common on cotton fabrics. The cotton is dyed in the raw, in the yarn, or in the piece; then a paste, which by chemical action bleaches out a pattern, is applied with rollers. White dots or small patterns are often produced on dark backgrounds in this way. If this is not done wisely, the fabric may wear out quickly where the color was discharged.

SCREEN PRINTING.—In its early stages, screen printing had to overcome many prejudices, as it was frequently confused with the already oft repeated experiments with paper stencil printing. The purpose of screen printing is to fill in the hiatus

between hand block and machine printing, i.e., it is intended to be employed in those cases in which, taking into account the cost of equipment and the cost of making the blocks, the quantity of material is too great for hand block printing and too small for machine printing. It must be borne in mind, however, that in consequence of technical difficulties in the manufacture of the screens, and also in the printing itself, not every design is capable of being prepared and executed. Rather is it the task of the dyer, with the cooperation of the designer, to modify a design, without changing its character, so that it can be executed.

Activity

Collect samples of cotton, wool, silk, linen, and rayon fabrics and determine for composition. Paste the samples in the notebook.

Textile Facts in Buying Cloth

In order to buy textiles efficiently, it is necessary (1) to know the use in the fullest sense of the word, and (2) to note carefully the price and width of the different materials that you desire to use. Change the price to the value of the equivalent of a square yard and purchase the lowest price. (3) Since the same fabric differs not only in width but quality, be sure you select the quality that gives you the greatest service for the money. Try to purchase textiles that contain labels designating the quality or standard. If such textiles cannot be found, purchase those of standard grades or trade names as described in *Attractive Clothes*, page 481. (4) Care must be used in cutting the fabric economically and artistically.

EXAMPLES

Find the cost per square yard and the relative economy in purchasing:

- (a) Prunella, 46" wide, at \$1.50 a yard.
Prunella, 44" wide, at \$1.35 a yard.
- (b) Serge, 54" wide, at \$1.25 a yard.
Poplin, 42" wide, at \$1.00 a yard.
- (c) Serge, 42" wide, at 49 cents a yard.
Serge, 37" wide, at 39 cents a yard.

- (d) Shepherd check, 54" wide, at \$1.75 a yard.
Shepherd check, 52" wide, at \$1.50 a yard.
Shepherd check, 42" wide, at \$1.00 a yard.
- (e) Taffeta, 19" wide, at 89 cents a yard.
Taffeta, 36" wide, at \$1.25 a yard.

Cut and Grain of Cloth.—On pages 217-219 of *Attractive Clothes*, the cut and grain of cloth were discussed. For final and more intensive study, review Chapters 5 and 9 of *Attractive Clothes*, and Chapter 6 of this book.

Standard Grades.—There are on the market various standard grades of textiles and costumes to meet the desires of all consumers who are price-minded. There are high-priced, medium-priced, and low-priced grades. Most consumers desire good, substantial fabrics at minimum prices. The price cannot always be used as a measure of quality; hence, the consumer's safest guide is to buy

1. From a reliable merchant.
2. By the trade names of reliable manufacturers who have supplied satisfactory textiles in the past.
3. Labeled goods, stating fabric content, laundering qualities, etc.

Silk Sales.—Bargains in silk fabrics and silk costumes may be obtained at silk sales where the retailer desires to sell quickly, at small or no profit, excess fabrics on hand. Then again, these sales may be sponsored at reduced prices to create a desire for and a love of silk fabrics and to educate the public in the value of silk.

QUESTIONS

(Some of the questions are review questions about matters that have been described in detail in *Attractive Clothes* and resumed in this volume.)

1. Enumerate the characteristic qualities of cotton fabrics that make them of value commercially.
2. (a) Name some of the most important cotton fabrics. (b) List value to consumers.

3. Describe some of the more important linen fabrics. State important qualities that contribute to their use in the home.

4. (a) Enumerate the characteristics of wool fabrics. (b) List some of the more common wool fabrics, with a statement of their uses.

5. Explain the meaning of the term texture as used in dress-making and designing. Why is a knowledge of texture valuable in the use, designing and making of costumes?

6. Why should one have a knowledge and appreciation of textiles in order to select clothing that is practical, suitable, and attractive?

7. (a) Describe the different kinds of texture. (b) On what does the texture of a fabric depend?

8. On what does the fineness of a fabric depend?

9. State the importance of elasticity for its use in garment making.

10. List fabrics in the order of their absorbing power.

11. Why is the shape of the individual fibers important in the use and making of costumes? Describe the shape and characteristics of each fiber under the microscope.

12. Describe the sources with a description of the characteristics of each kind of fiber.

13. (a) How is the yarn made from the individual fibers? (b) What is the difference between a yarn and a thread?

14. How are (a) thin fabrics, (b) sheer or translucent fabrics, (c) opaque fabrics, made?

15. Describe briefly how (a) weighty fabrics, (b) light fabrics, (c) nap fabrics, (d) soft fabrics are made. Explain their effect on the texture of the fabrics.

16. (a) Outline the steps in order in finishing different types of fabrics. (b) Explain the effect of each of the principal finishes on the texture of the fabrics.

17. (a) Describe the different methods of dyeing fibers and fabrics. (b) Explain the reasons why some textiles are easier to dye than others.

18. (a) What is meant by "fast" in dyed and printed fabrics? (b) Explain, in detail with illustrations, its importance in the clothing industry.

19. Outline the steps in textile printing, with reasons for each step. Describe the different kinds of textile printing.

20. Describe the tests used in testing textiles.

21. State the meaning of "trade names" and "quality standards" in buying clothing.

22. What are the textile facts to keep in mind when buying fabrics?

REFERENCES

- American Bemberg Corporation. Suggestions for a Class Project. (Booklet.)
- Bray, Helen A. Textile Fibers, Yarns and Fabrics. D. Appleton-Century Co.
- Celanese Corporation of America. Facts About Celanese. (Booklet.)
- Denny, Grace. Fabrics and How to Know Them. J. B. Lippincott Co.
- Dooley, William H. Textiles. D. C. Heath & Co.
- Hess, Katherine P. Textile Fibers and Their Use. J. B. Lippincott Co.
- McGowan, Ellen B., and Waite, Charlotte A. Textiles and Clothing. The Macmillan Co.
- Sage, Elizabeth. Textiles and Clothing. Charles Scribner's Sons.
- Small, Cassie. How to Know Textiles. Ginn & Co.
- Spool Cotton Company. The Evolution of Cotton Thread. (Booklet.)
- Viscose Company. The Story of Rayon. (Booklet.)

CHAPTER 10

ADVANCED MACHINE WORK—USE OF ATTACHMENTS

In Chapter 2 of *Attractive Clothes*, considerable space was devoted to knowledge of the characteristics of good sewing equipment, which involves the ability (a) to choose sewing equipment and (b) to operate and use the simple attachments of sewing machines. This chapter will continue the subject, showing how to plan the sewing work with a view to saving time, labor, and money by using the more complicated sewing machine attachments—involving advanced machine sewing.

The sewing machine is equipped with various types of attachments, such as binder, tucker, ruffler, hemmer, etc., for simplifying sewing. One must learn how to use these attachments in order to save time. The following explanations should be carefully studied with much practice.

Singer Sewing Machine Attachments

(Courtesy of Singer Sewing Machine Co.)

The Binder

The binder (Fig. 118) is included in the set of attachments furnished with most family machines. The work of this attachment consists in turning the edges of bias material and applying it to the seam or edge of a garment at one stitching. When properly adjusted and operated, the stitching will come close to the edge of the binding.

Preparing Binding for Use in the Binder.—The bias gauge is very convenient to use when cutting bias bands from $7/16$ to $1\frac{3}{8}$ inches in width. By placing the gauge on the pointed end of the scissors and setting the blue spring indicator (A, Fig. 119) to the width desired, bias binding may be

cut from any material. The letter *F* is the point to set the indicator for facings, *B* for binding, and *C* for cording or piping.



FIG. 118. The Binder



FIG. 119. The Bias Cutting Gauge

THE PROPER WIDTH OF BINDING TO USE WITH THE BINDER.—Adjust the blue spring indicator on the bias gauge to the letter *B* and attach to the pointed end of the scissors, as shown in Fig. 120. Insert the material in the gauge with the edge even with the indicator and cut as shown in Fig. 121. Always cut the material on the true bias for use with the binder.

The binding must measure from $\frac{7}{8}$ inch to 1 inch in width, depending upon the texture of the material. Fabrics finished with



FIG. 120. Attaching Bias Gauge to Scissors



FIG. 121. Cutting Bias Strips

dressing, such as percale or cambric, will work successfully when cut $\frac{7}{8}$ inch wide, while soft material, such as batiste, lawn, or silk, must measure from $\frac{15}{16}$ inch to 1 inch in width. A trial with the binder will quickly determine the proper width for the material to be used. When binding is cut too narrow, the edges will not turn in, and if too wide, will fold over in plaits.

The cutting gauge will insure an even width of binding and a quantity can be cut in a short time.

JOINING BIAS STRIPS.—One yard of yard-wide material will make about 30 yards of bias strips $\frac{7}{8}$ inch wide. It is usually an economy to purchase this amount and save any surplus for future use.

Cut the strips, lay the two diagonal ends together, as shown in Fig. 122a, and stitch the ends together. The stitching should be as close to the edge as possible, so that the seam will pass through the binder freely. When the strips are straightened out, as shown in Fig. 122a, the edges will be exactly even. Do not join the strips as

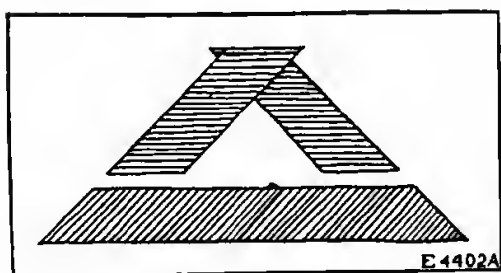


FIG. 122a. The Right Way to Join Strips

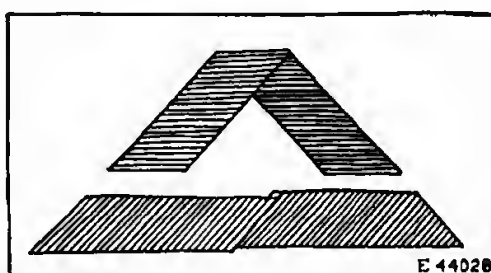


FIG. 122b. The Wrong Way to Join Strips

shown in Fig. 122b, as the edges will be uneven when straightened out. It is advisable to press the seams open with an iron, and if the strips are not to be used immediately, they should be wound on a piece of cardboard to keep them from stretching.

Attaching the Binder to the Machine.—Raise the needle to the highest point and remove the presser foot from the machine by loosening the thumb screw which holds it in place. Compare the foot of the binder and the presser foot and you will see that they are attached to the machine in the same manner. Attach the binder to the presser bar. Turn the balance wheel slowly toward you to make sure that the binder is properly attached to the bar and that the needle goes through the center of the needle hole.

INSERTING THE BINDING IN THE BINDER.—Cut the binding to a long point, as shown in Fig. 123. Insert the pointed end in the binder scroll, Fig. 124, until the pointed end comes through the lower end of the scroll.

Pull the binding through under the presser foot before starting to sew. Note that as the binding passes through the scroll of the binder the edges are turned in.



FIG. 123. Cutting Point on Binding

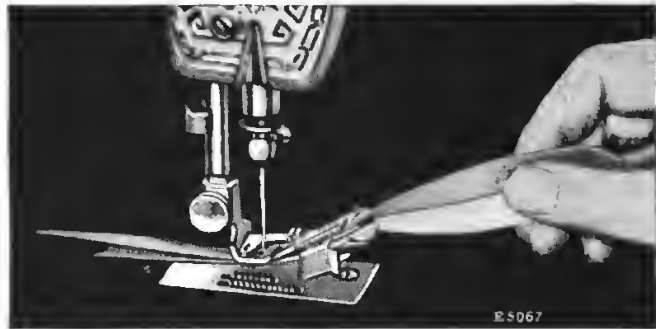


FIG. 124. Inserting Binding in Binder

The Adjustment and Operation of the Binder.—The edge to be bound should be held well within the center slot of the scroll (A, Fig. 125). If the material is allowed to slip away from the scroll when near the needle, the edge will not be

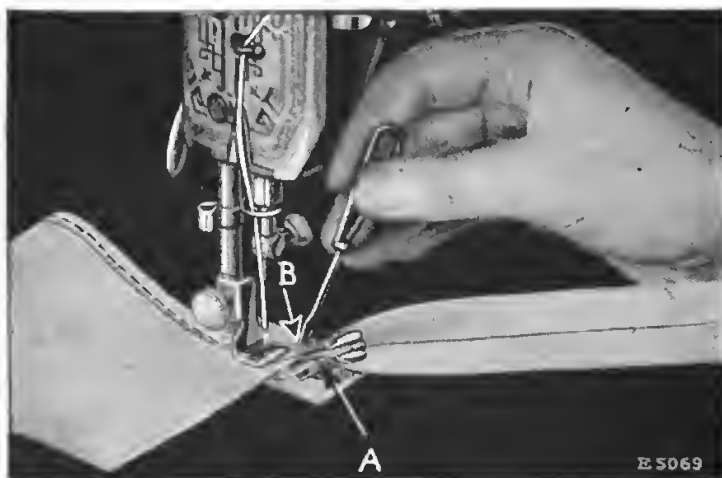


FIG. 125. Adjusting the Binder

caught in the binding. With a little practice it is quite easy to hold the edge in the scroll.

Various materials and conditions require different adjustments of the binder to bring the stitching close to the edge. A wider adjustment of the binder is required when binding curves than is necessary when binding a straight edge.

To adjust the binder for stitching, loosen screw *B* (Fig. 125) and move scroll to the right for a narrower adjustment and to the left for a wider adjustment. Care should be taken to see that the screw is well tightened after making an adjustment. To become perfectly familiar with the adjustment of the binder, practice is necessary.

Never pull the binding as it feeds through the binder, as bias material is very easily stretched and will be too narrow when it reaches the needle. When this occurs, the edges will not be turned.

Making Various Bindings.—The operations for constructing various bindings are given below.

BINDING OUTSIDE CURVES.—Practice is required to bind a curved edge properly. The edge to be bound must be allowed to pass freely through the scroll and should not be crowded against the wall of it. Guiding should be from the back of binder and to the left of it, allowing the unfinished edge to swing naturally into the scroll of the binder.

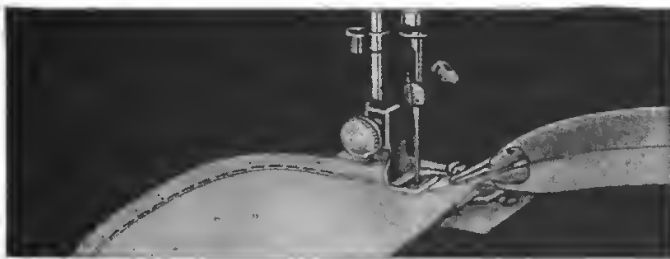


FIG. 126a. Binding an Outside Curve

When binding a curved edge (Fig. 126a), turn the material only as fast as the machine sews. It is not possible to hold the material in the entire length of the scroll when binding a small curve.

Do not push the material in too fast, as the edge will then become puckered, and do not stretch the material or the curve will not be the proper shape when finished. If the stitching does not catch the edge of the binding, the scroll should be adjusted a trifle to the left.

Binding applied with the binder will have a neat tailored finish that cannot be gained by basting the binding in position and then stitching with the presser foot.

BINDING INSIDE CURVES.—It will be necessary to practice binding an inside curve on various kinds of material, as this curve is found on nearly all garments which may be finished with a bound edge. (Fig. 127.)

When binding an inside curve with the binder, straighten out the edge as it is being fed into the attachment. When doing this, care should be taken not to stretch the edge of the material.

If the material is soft, like batiste or crepe de Chine, add a row of machine stitching close to the edge of the curve before binding.



FIG. 126b. Sample of
Outside Curve



FIG. 127. Sample of
Inside Curve

APPLYING A FRENCH FOLD TO A CURVE.—Binding makes a very attractive trimming when applied as a French fold in a contrasting color, or when made of white and applied to a colored garment. To apply the French fold to a garment, insert the binding in the binder in the regular way and place the garment to which the trimming is to be applied directly under the attachment. (Fig. 128.)

It is well to mark a line on the material where the fold is desired.



FIG. 128. Applying French Folds

BOUND SCALLOPS.—The same method used in binding an outside curve is used for binding scallops. The point at the top of the scallop is bound in exactly the same manner as the placket. Practice the binding of a small single scallop first before attempting to bind a row of scallops.

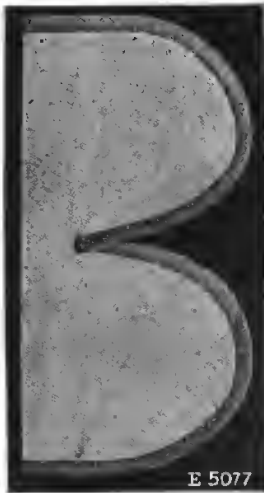


FIG. 129. Sample of Bound Scallops

If the material is soft and liable to stretch, add a row of machine stitching close to the edge of the scallop before starting to bind the edge.

BINDING A SQUARE CORNER.—To bind a square corner, apply the binding along one side to within an $\frac{1}{8}$ inch of the edge of the material, stopping the machine with the needle and take-up at the highest point. Then draw the material back away from the needle far enough to pull about 2 inches of the binding through the binder. Fold and crease the binding to a square mitered corner, turn the material and draw it back into the binder, bringing the needle down through the binding close to the corner, as shown in Fig. 130a. Draw the slack thread back

through the needle and tension. Be sure the new edge of the material is properly placed in the scroll of the binder and begin stitching slowly until you are sure the material is feeding properly. The loop of the thread on the underside at the corner may be tied or cut off without fear of raveling, as the stitch is locked.

APPLYING MILITARY BRAID WITH THE BINDER.—Most attractive trimmings for serge or other woolen dresses may be developed by using military braid as a binding. The braid must measure $\frac{1}{2}$ inch in width

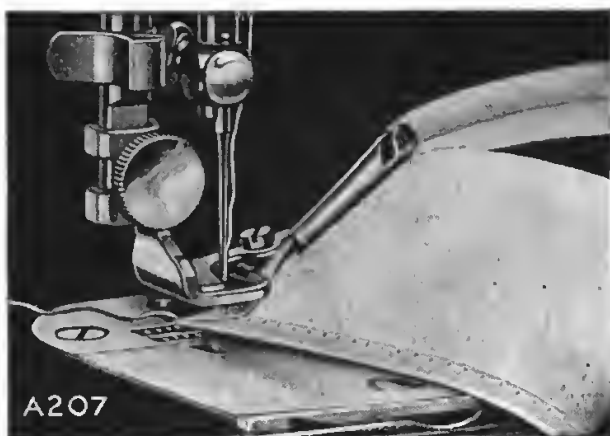


FIG. 130a. Turning a Square Corner

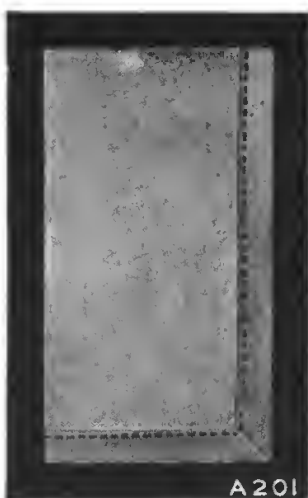


FIG. 130b. Sample of Square Corner



FIG. 131b. Military Braid Applied with Binder

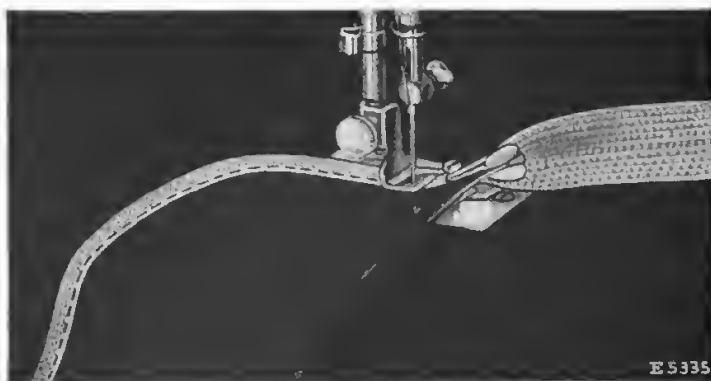


FIG. 131a. Binding with Military Braid

for use with the binder and it must be inserted in the outside slot of the binder. (Fig. 131a.)

Curved edges on woolen material are quite as easy to bind as on cotton material. Military braid makes an excellent finish for the neck and cuffs or the panels on a serge dress. It is impossible to give this braid a tailored finish when applying it by hand or first basting and then stitching it.

This braid comes in a variety of colors in silk and cotton.

The Foot Hemmer and the Adjustable Hemmer

The Foot Hemmer.—The foot hemmer (Fig. 132) is attached to the machine in place of the presser foot. Raise the needle to the highest point, loosen the thumb screw which clamps the presser foot to the presser bar, and remove the presser foot. Attach the foot hemmer to the bar, taking care to tighten the screw firmly so that the hemmer will not become loose when the machine is running. Turn the balance wheel slowly to make sure that the needle goes through the center of the needle hole and that the lower thread is properly pulled up.



FIG. 132. The Foot Hemmer

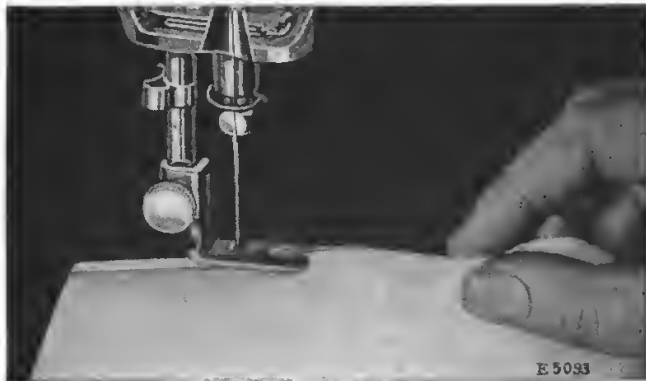


FIG. 133. Starting a Hem at the Edge

How to Start the Hem at the Very Edge.—How to start the hem at the very edge of the material is of great importance in learning to use the hemmer. If the hem is not started at the edge and the material is pulled bias, a perfect hem cannot be made.

There are several ways of starting the hem at the edge, but the most practical one is as follows:

1. Fold over about $\frac{1}{8}$ inch of the edge of the material at the starting point for a distance of about one inch.
2. Place the material in the hemmer on an angle leading to the right at a point just beyond the fold.
3. Draw the material toward you through the hemmer, as shown in Fig. 133, at the same time making the second fold at the very edge. Continue to draw the material through the hemmer until the edge is just under the needle. Place the upper and lower threads together under the hemmer foot, and assist the starting of the hem by slightly pulling the threads from the back as the machine is run.

This method makes it possible to start the hem very easily and neatly at the edge after a little practice.

Another way to start a hem is by clipping off a corner of the material and slipping the edge carefully into the scroll of the hemmer. It is not possible, however, to make a perfect starting in this manner.

Making a Hem with the Foot Hemmer.—The same width of material must be kept in the hemmer at all times. After placing the correct width of material in the hemmer, hold it in a straight line and you will find it quite easy to make a perfect hem. (Fig. 134.)



FIG. 134. Making a Hem with the Foot Hemmer

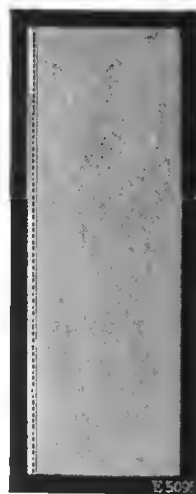


FIG. 135. Hem Made with the Foot Hemmer

If too much cloth is fed into the hemmer, the hem will not be straight, while if too little is fed in, the edge of the hem will not be turned.

Practice hemming with the foot hemmer until you can make a perfect hem with ease before attempting to hem a garment.

HEMMING OVER A SEAM WITH THE FOOT HEMMER.—When a narrow hem is to be made over a French seam, the seam should be pressed as flat as possible and as the seam is reached in hemming, a bias corner should be cut from the seam, as shown in Fig. 136. This method makes it possible to hem over a fairly heavy seam without difficulty.

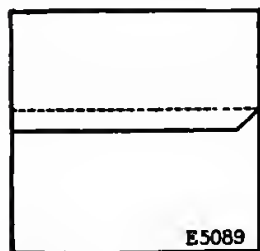


FIG. 136. Bias Corner on Seam

If an open seam is used, it should be basted flat to the garment about $\frac{1}{4}$ inch from the edge. A bias corner may then be cut from each edge of the seam to prevent the edge from turning in the wrong direction as it feeds into the hemmer.

HEMMING FINE MATERIALS WITH THE FOOT HEMMER.—When hemming fine materials such as georgette or crepe de Chine with the foot hemmer, the material will not feed through properly and the stitch will be very much shorter than when sewing with the presser foot on the same material.

To overcome this difficulty, and to assist in holding soft materials so that they will be turned properly with the foot hemmer, insert a piece of paper under the foot of the hemmer and allow it to feed through with the material. Strips of thin paper or the edges of newspapers are very convenient for stitching. Never use tissue paper, as this will be very difficult to pull away from the material.



FIG. 137. Hemmed Curve

The Adjustable Hemmer.—The adjustable hemmer (Fig. 138) is a part of the set of attachments supplied with most family machines. This hemmer will make a hem of any desired width up to 1 inch. For wider hems the scale may be released and thrown out of position.

Remove the presser foot and attach the hemmer to the presser bar, taking care that the needle comes in the center of the needle hole after you tighten the thumb screw.

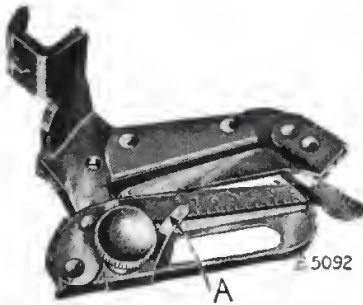


FIG. 138. The Adjustable Hemmer

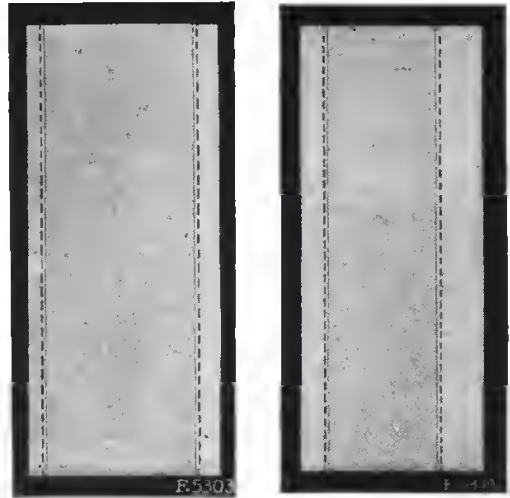


FIG. 139a. Hems Made with the Adjustable Hemmer

How to Adjust the Hemmer for Hems of Various Widths.—To adjust the hemmer loosen the screw and you will then be able to move the hemmer guide to the right or to the left. Note the pointer (A of Fig. 138) which is used in connection with the scale of figures on the adjustable hemmer.

The hemmer may be adjusted as follows:

Pointer set at:

1—	for	$\frac{1}{8}$ "	hem	(approximate)
2—	"	$\frac{1}{4}$ "	"	"
3—	"	$\frac{3}{8}$ "	"	"
4—	"	$\frac{1}{2}$ "	"	"
5—	"	$\frac{5}{8}$ "	"	"
6—	"	$\frac{3}{4}$ "	"	"
7—	"	$\frac{7}{8}$ "	"	"
8—	"	1"	"	"

After setting the hemmer, care should be taken to see that the adjusting screw is well tightened before starting to sew.

How to Insert the Material in the Adjustable Hemmer.

—Fold over the edge at the end of the material to be hemmed, as instructed for starting a hem with the foot hemmer. Place the material in the hemmer under the seale and draw it back and forth until the hem is formed.

You will then be able to determine the width and to fold over the end of the hem for the second turning. Draw the material back until the end comes directly under the needle. Lower the presser bar and sew, guiding sufficient material in the hemmer to turn the hem properly. (Fig. 139b.)

If the hem is not started at the edge, it will run bias and not come out even at the other end.

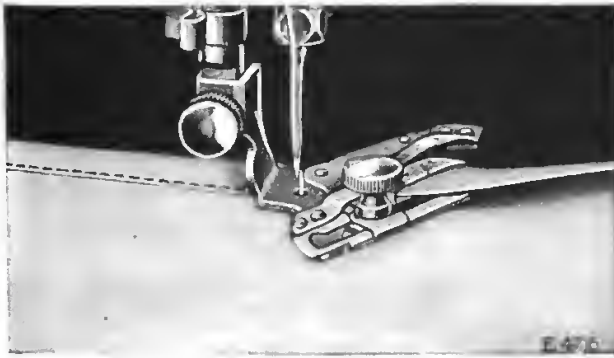


FIG. 139b. Hemming with the Adjustable Hemmer

HOW TO MAKE A WIDE HEM WITH THE ADJUSTABLE HEMMER.—To make a hem wider than 1 inch, loosen the adjusting screw and throw the scale guide out of position.

Fold and crease the hem the desired width by hand, place the edge in the hemmer, as shown in Fig. 140a, and commence to sew. The hemmer will now make one turning of the edge. The hem must be kept flat at all times to retain the desired width.

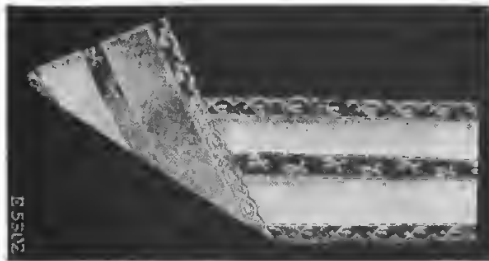


FIG. 139c. Lace Applied the French Way



FIG. 140a. Making a Wide Hem with the Adjustable Hemmer



FIG. 140b. Wide Hem Made on the Adjustable Hemmer

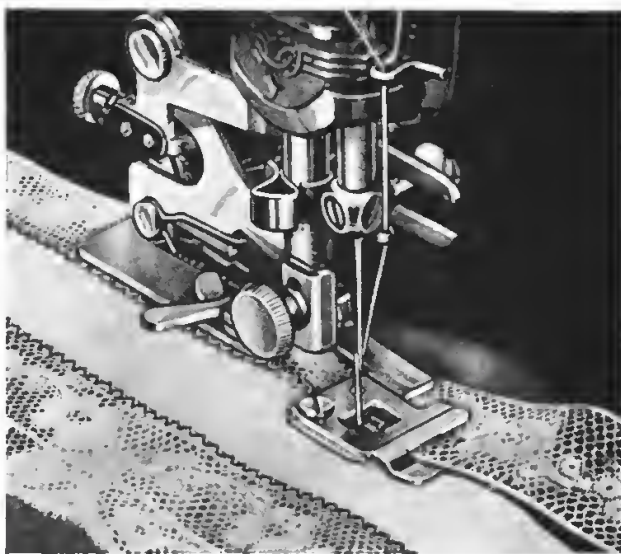


FIG. 140c. Use of Zigzagger

The Tucker

The Parts of the Tucker and Their Uses.—Select the tucker from the box of attachments, compare it with Fig. 141 and note the names and uses of the various parts, as follows:

The tuck guide, which is adjustable and may be set for any desired width of tuck.

The tuck scale, containing figures which indicate different widths of tucks. The tuck scale also acts as a smoother blade, keeping the tucks of uniform width.

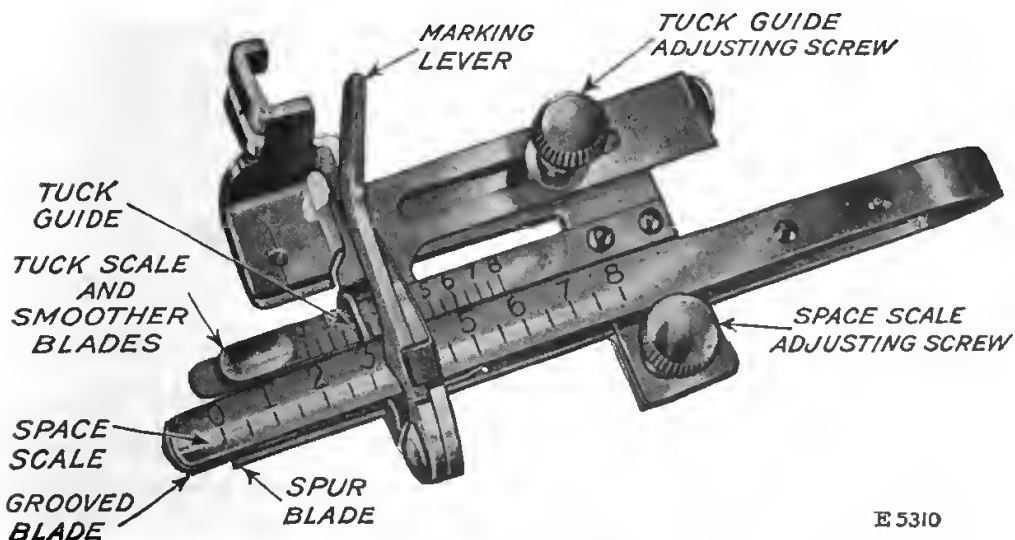
The tuck guide adjusting screw, by means of which the tuck guide may be set at any point on the tuck scale.

The space scale, containing figures on the upper blade which indicate the width of the space between tucks. The middle or *grooved blade* contains a groove into which the material is pressed by the *spur* at the end of the lower or *spur blade*, thus marking the goods for the folding of the next tuck.

The space scale adjusting screw, by means of which the space scale may be set at any desired point.

The marking lever, which presses on the groove blade, marking the material as it passes between the grooved and spur blades.

A careful study of the tucker parts and their relation to each other before using this attachment will make its operations quite clear.



E 5310

FIG. 141. The Tucker and Its Working Parts

WHERE TO OIL THE TUCKER.—The only place on the tucker that requires oiling is the stud on which the marking lever works (Fig. 144.) One drop of oil occasionally is sufficient. Careless oiling will result in oily blades and soiled material. When the marking lever does not move up and down freely, it requires oiling. If neglected it may become so dry that it will stay down and cause a drag on the material instead of lifting freely as the mark is made.

To Attach the Tucker to the Machine.—Raise the needle bar to the highest point, remove the presser foot from the machine and attach the tucker in its place. Care should be taken to see that the tucker is securely fastened to the presser bar and that the needle goes through the center of the needle hole. Note the position of the marking lever, making sure that it is in the lower position and that the needle clamp works on it as the machine sews.

How to Adjust the Scales on the Tucker.—The width of the tucks and the space between them is determined by the adjustment of the scales. Adjustment for width of tuck is made by loosening the tuck guide adjusting screw, which allows you to move the tuck guide to the desired figure on the tuck scale. The tuck guide should be set just over the figure you wish to use. The adjusting screw should always be well tightened.

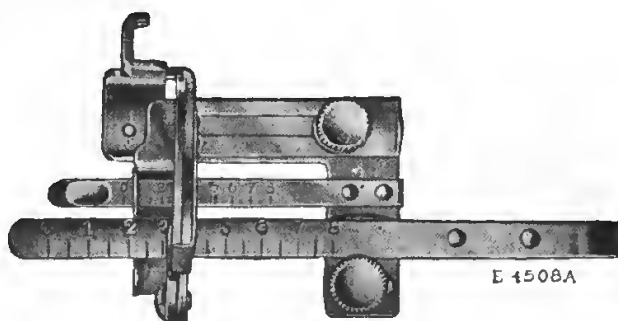


FIG. 142. Tucker Set at Pin Tuck and 2 Space

To adjust for the width of space between the tucks, loosen the space scale adjusting screw and move the space scale until the desired figure is directly in a line with the center of the needle hole. You will find a line in front and back of the needle hole to indicate the center.

Before starting to sew, tighten the screw well to prevent the scale shifting when the tucker is in operation.

The figures on the tuck scale indicate the width of tuck in eighths of an inch, the marks between figures are sixteenths. The marks on the space scale are double the width of those on the tuck scale, so that when both scales are set at the same figure, blind tucks without spaces between them are made.

To make space between tucks, first set the tuck scale, then move the space scale to the same number and as much farther to the left as you wish to have space. Each number on the space scale represents $\frac{1}{4}$ inch and each mark between numbers $\frac{1}{8}$ inch.

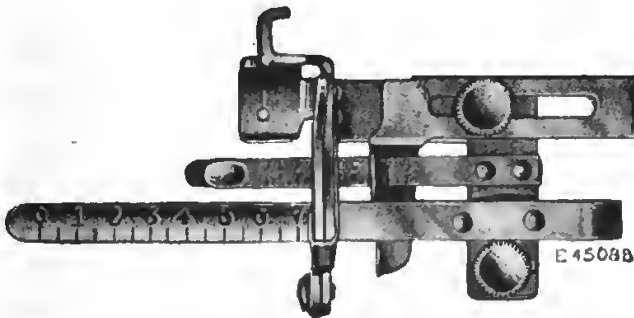


FIG. 143. Tucker Set at 6 Tuck and 6 Space

Use the table below to assist you in setting the tucker.

	Tuck Guide	Space Scale
$\frac{1}{8}$ " tucks with no space.	1	1
$\frac{1}{8}$ " " " $\frac{1}{8}$ " "	1	$1\frac{1}{2}$
$\frac{1}{4}$ " " " no "	2	2
$\frac{1}{4}$ " " " $\frac{1}{4}$ " "	2	3
$\frac{1}{2}$ " " " no "	4	4
$\frac{1}{2}$ " " " $\frac{1}{2}$ " "	4	6
1" " " no "	8	8

Note Fig. 142, showing tucker set at a pin tuck and 2 for space; also Fig. 143, tucker set at 6 for tuck and 6 for space.

The Proper Length of Stitch to Use for Tucking.—About 20 stitches to the inch is the average to use for tucking lawn or muslin. However, this is largely a matter of choice. A shorter stitch may be used if desired, but a stitch longer than this is not attractive.

To test for the number of stitches, sew on a double fold of the same material you are going to tuck, mark off 1 inch with the tape measure and count the stitches.

Do not use an extremely short stitch on taffeta, as it may break the threads in the material and cause it to crack. Never use a long stitch on fine material, for it is liable to pucker unless the tensions are most carefully adjusted.

Always test out the tucker on a piece of the material you are going to tuck and make sure the tensions and size of tuck are satisfactory before starting to tuck.

Where to Insert the Material to be Tucked.—Fold and crease the first tuck for its entire length by hand, insert it in the tucker from the left, placing it between the grooved blade and the spur blade of the space scale, and between the two blades of the tuck scale. (Fig. 144.)

Care should be taken to see that the material is placed far enough in the tucker to feed against the tuck guide. Draw the material towards you until the edge is directly under the needle. Lower the presser bar and sew. You will note that the tucker is now making a mark for the next tuck.

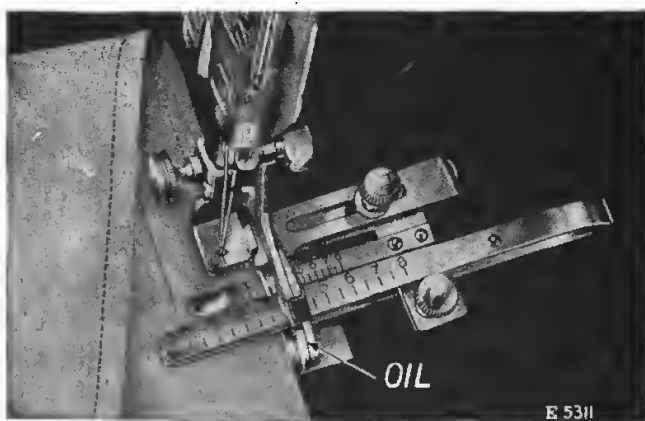


FIG. 144. Proper Position of Material in Tucker

Making Different Types of Tucks.—Operations for tucking are given below.

HOW TO MAKE EVEN TUCKS.—When the first tuck is finished, fold the material on the mark made by the spur during the sewing of the first tuck. Insert the folded edge in the tucker exactly as for the first tuck except that it is important to see that the first tuck is against the inside of the spur. After lowering the presser bar, raise the material slightly and adjust it until the folded edge is just touching the tuck guide and the first tuck is against the spur. This insures the feeding of the material evenly into the smoother blades, where it is pressed flat ready for sewing. Until you are thoroughly familiar with the use of the tucker, always lift the material when starting each tuck to be sure that the preceding tuck is against the spur.

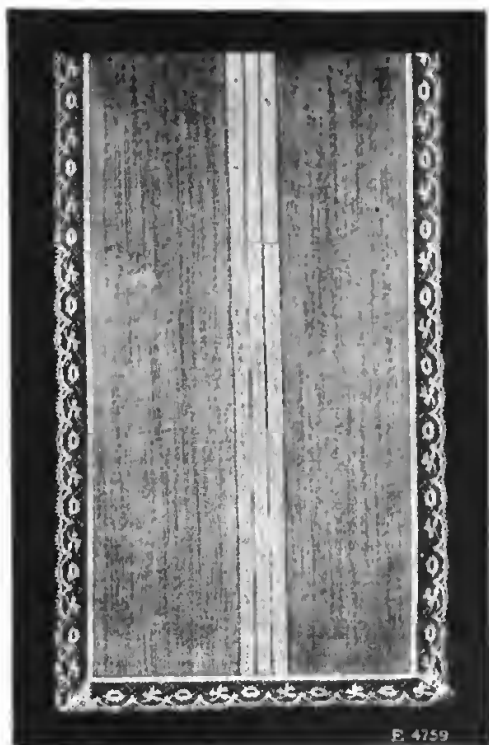


FIG. 145. Sample of $\frac{1}{8}$ Inch Tucks

Tucks must be even to be beautiful and the tucker will make them so if properly handled. The material should be inserted between the upper and lower blades of the tuck scale. When the material is not placed between the two smoother blades, it tends to work away from the guide and uneven tucks are made.

Tucks make very attractive trimming when well made, but to be sure of this result care should be taken to see that all conditions are right. The thread used should match as closely as possible the threads of the material upon which you are sewing and a good needle of the proper size for the thread must be employed. The length of stitch should be in proportion to the texture of the material.

HOW TO TUCK WITHOUT MARKING.—As the needle bar descends, the needle clamp strikes the marking lever, pushing it down and pressing the grooved blade against the spur, thus marking the material which passes between them. When no mark is desired, as in making the last tuck, the marking lever may be pulled upward toward the operator, where it is held in place by the spring. In this position it is out of contact with the needle clamp and no mark is made.

This feature is valuable when using the tucker in connection with a commercial pattern or when tucking heavy material which the tucker will not mark. When using a commercial pattern, the tuck is folded on the line of perforations and inserted in the tucker after the tucker has been adjusted to suit the size of tuck called for on the pattern. The tucker then acts as a sewing guide and keeps the tuck of even width without basting.

HOW TO ADJUST A TUCKER THAT DOES NOT MARK PROPERLY.—If the material is not placed between the grooved blade and the spur, or if the lever is not down in the proper working position, the tucker will not make a mark.

If the tucker makes only a faint mark, it is because the spur does not come exactly in the center of the groove. Remove the tucker from the machine, hold it upside down, press the blades together and observe whether the spur comes exactly in the center of the groove. If not, bend the grooved blade slightly with a pair of pliers until the correct position is obtained.

The Ruffler

The Parts of the Ruffler and Their Uses.—It is necessary to become familiar with the ruffler before it can be used successfully. Select the ruffler from the set of attachments and compare it with Fig. 146.

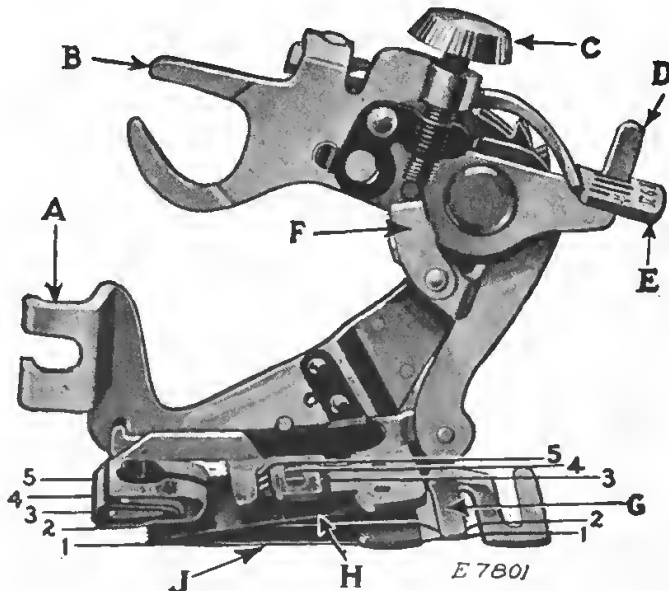


FIG. 146. The Ruffler and Its Parts

Note the names and uses of the principal parts, as follows:¹

A—Foot—the part by which the ruffler is attached to the presser bar.

B—Fork Arm—the section that must be placed astride the needle clamp.

C—Adjusting Screw—the screw that regulates the fullness of the gather.

D—Projection—the part that projects through the slots in the adjusting lever.

E—Adjusting lever—the lever that sets the ruffler for gathering or for making a plait once at every 6 stitches or once at every 12 stitches, as desired; also for disengaging the ruffler, when either plaiting or gathering is not desired.

F—Adjusting finger—the part which regulates the width of size of the plaits.

G—Separator guide—the guide on the underside of the ruffler, containing slots into which the edge of the material is placed to keep the heading of the ruffle even; also for separating the material to be ruffled from the material to which the ruffle is to be attached.

H—Ruffling blade—the upper blue steel blade with the teeth at the end to push the material in plaits up to the needle.

J—Separator blade—the lower blue steel blade without teeth, which prevents the teeth of the ruffling blade coming into contact with the feed of the machine, or the material to which ruffle or plaiting is to be applied.

Lines 1, 2, 3, 4 and 5 (Fig. 146) indicate where the material is to be placed for various operations, as follows:

Line 1—the proper position for the material to which the ruffle is applied.

Line 2—the material to be gathered.

Line 3—the facing for the ruffle.

Line 4—the strip of piping material.

Line 5—the edge to be piped.

Refer to this illustration when inserting the material in the ruffler.

OILING THE RUFFLER.—The ruffler requires an occasional oiling of all working parts to prevent them from sticking. A drop of oil at each point indicated in Fig. 147 is sufficient. If possible, sew on a

¹ If the rufflers with your machines are not exactly like Fig. 146, you will find the working parts quite similar. The 66-1 Singer machine has an entirely different type of foot from other Singer models, and it is well to compare the foot on the ruffler with the presser foot before attempting to attach the ruffler to the machine.

waste piece of material after oiling to prevent your garment from becoming soiled. If the ruffler does not plait evenly a drop of oil may remedy the trouble.



FIG. 147. Oiling Points on Ruffler

Attaching the Ruffler to the Machine.—Raise the needle bar to the highest point and remove the presser foot. Attach the ruffler foot to the bar, at the same time placing the fork-arm astride the needle clamp. Turn the balance wheel slowly by hand to see that the needle comes down in the center of the needle hole.

To Adjust Ruffler for Gathering.—The adjusting finger (*F*, Fig. 148) is not intended for gathering and should be moved toward the operator or away from the needle.

Raise the adjusting lever (*E*, Fig. 148) and move it to the left so that the projection (*D*, Fig. 148) will enter the slot marked "1" in the adjusting lever (*E*) when the lever is released. The ruffling blade will then move forward and back once at every stitch. Insert the material to be ruffled between the two blue blades, following the line 2 in Fig. 146. Draw the material slightly back of the needle, lower the presser bar and commence to sew.

To make fine gathering, shorten the stroke of the ruffling blade by turning the adjusting screw (*C*, Fig. 148) upward,



FIG. 148. Making a Plain Gather

also shorten the stitch. To make full gathering, lengthen the stroke of the ruffling blade by turning the adjusting screw (*C*) downward, also lengthen the stitch. By varying these adjustments, many pleasing varieties of work can be accomplished.

INSERTING THE MATERIAL IN THE RUFFLER AND MAKING A PLAIN GATHER.—For ruffling or gathering, the adjusting finger should be released or turned toward the operator.

Insert the material in the ruffler between the two blue blades

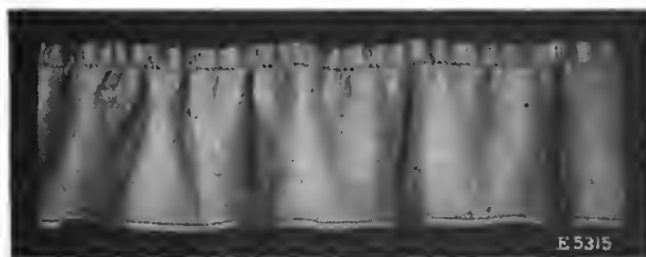


FIG. 149. A Plain Hemmed Ruffle

following line 2 (Fig. 146). Pull the edge of the material to be gathered forward until it is slightly past the needle, lower the presser bar and sew. (Fig. 148.) The fullness of the ruffle is determined by the

position of the adjusting screw. To *decrease* the fullness turn the screw *up*. To *increase* the fullness turn the screw *down*.

The length of stitch also has its effect on the gathers. A short stitch will make a fine gather, while a coarse stitch will decrease the fullness and make the plaits larger.

A FACING MAY BE ADDED AT THE SAME TIME THE RUFFLE IS MADE.—First insert the material for the ruffle in the ruffler between the two blades and the garment under the separator blade, as directed for sewing the ruffle to the garment in one operation. Place the material for the facing in the ruffler, following line 3 (Fig. 146). The facing may be straight or bias material. If the facing is to be on the wrong side, place the right sides of the garment and the ruffle together. (Fig. 150.)

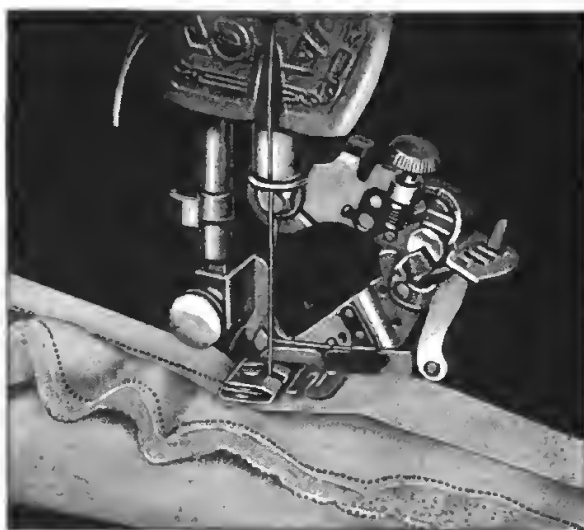


FIG. 150. Adding a Facing as the Ruffle is Made

HOW TO TEST THE RUFFLE FOR FULLNESS.—It is often necessary to adjust the ruffler for a certain fullness, but because the length of stitch affects the fullness as well as the position of the adjusting screw, it is impossible to have an indicator on the ruffler determine the amount of fullness that will be taken up. In addition, some materials take up more fullness than others with the same setting of the stitch and adjusting screw. It is therefore necessary to experiment with a small piece of the material to be ruffled if the correct amount is to be gathered. For example, if the fullness of a ruffle is to be one and a half, take a 6-inch piece of material and gather it into a 4-inch space.

HOW TO SLIDE THE GATHERS ON THE THREAD.—Another convenient way to gather to fit a given space is to loosen the upper tension on the machine. This will allow the gathers to slide on the thread to fit the desired space the same as in hand gathering.

When gathering in this way it is necessary to leave a long thread when taking the material from the machine so that the gathers may be adjusted as desired. It is also well to use a strong upper thread to avoid danger of breaking it when sliding the gathers.

Adjusting the Ruffler for Plaiting.—For plaiting, the adjusting finger should be set into position under adjusting screw. The projection should be placed in the slot marked 6 or the slot marked 12 in the adjusting lever. The adjusting screw on the ruffler must be turned down as far as it will go

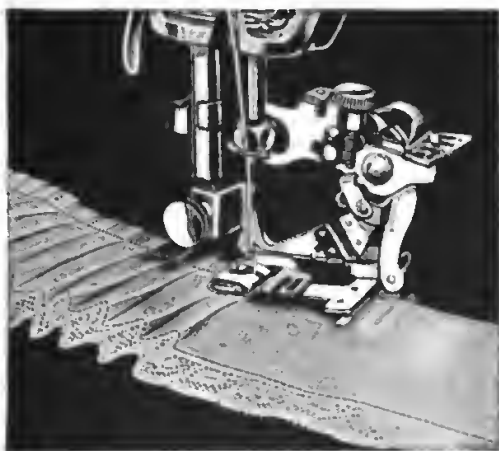


FIG. 151a. The Ruffler Adjusted for Plaiting

when plaiting. To make the plaits farther apart, *lengthen* the stitch on the sewing machine. To make them closer together, *shorten* the stitch. (Fig. 151a.)

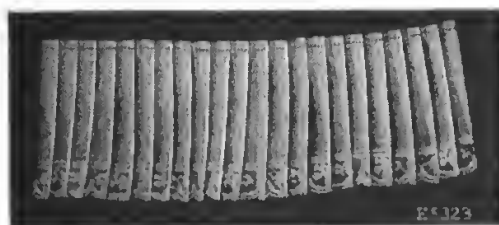


FIG. 151b. Sample of Plaited Organdie with Lace Edge

MATERIALS THAT MAY BE PLAITED WITH THE RUFFLER.—Any material with dressing, such as lawn, organdie, or taffeta, may be successfully plaited with the ruffler. Softer materials may be plaited but the plaits will not lie flat unless they are very well pressed. In the case of georgette or soft net, it is impossible to press the plaits by hand so that they will stay in position. Materials for plaitings should be finished on one edge with a narrow hem or by picoting on a special power hemstitching machine. (Fig. 151b.)

PLAITING AND SEWING TO THE GARMENT IN ONE OPERATION.—Plaiting may be made and sewn to the garment in the same manner as ordinary ruffling. The garment is placed under the blades and the material to be plaited between the two blades. (Fig. 152a.)

Attractive plaited trimmings for organdie dresses may be applied in the same manner as rows of ruffles.

It is necessary to test out a small strip of the material to be plaited before applying it to a garment at one operation, to determine how many yards of plaiting material will be required for the garment.

If you find after testing out the material that more is required than you had estimated, the machine may then be set for a longer stitch. This will increase the space between the plaits and fewer plaits will be required for the trimming.

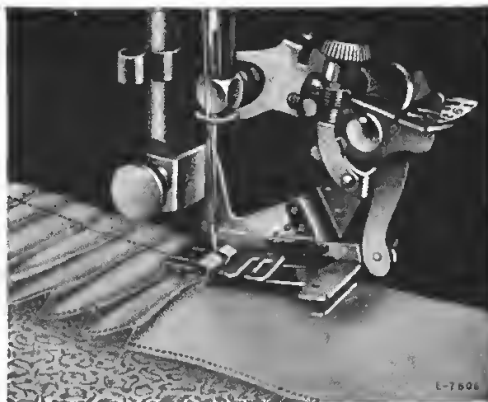


FIG. 152a. Plaiting and Sewing to the Garment in One Operation

Each plait should be pressed flat with the finger as it is made. It will be necessary to run the machine very slowly when doing this, but with a little practice it is quite easily done. The plaits should be pressed in with a warm iron after taking the work from the machine. (Fig. 152b.)

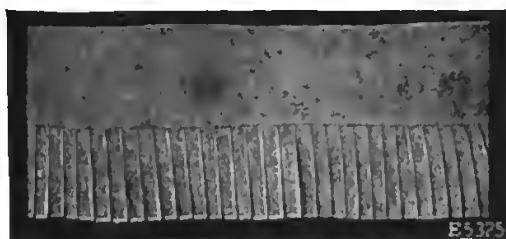


FIG. 152b. Sample of Plaiting and Sewing to Garment in One Operation

To Adjust the Ruffler for Group Plaiting and Gathering.—The ruffler can be adjusted for group plaiting by lifting the adjusting lever (*E*, Fig. 153a) and moving it to the right

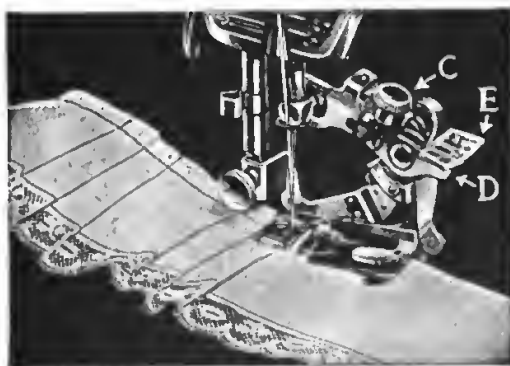


FIG. 153a. Group Plaiting

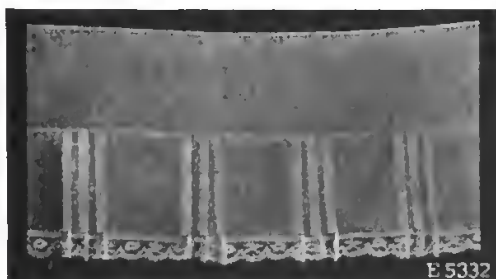


FIG. 153b. Sample of Group Plaiting Sewn to a Band

so that the top of the projection (*D*) rests on the small slot indicated by the star on the adjusting lever. This should be done at the points where space is desired between the plaits.

The ruffler will then stop and plain stitching will be made. When the desired space has been made, adjust the lever (*E*) so that the projection (*D*) enters either the slot marked "6" or the slot marked "12". By alternately making groups of plaits and plain spaces, as shown in Fig. 153a, very attractive work can be produced.

Presser Feet

Presser Feet for Stitching on Edge and Inserting Cord.

—Presser feet for stitching on edge and inserting cord are furnished in two styles, 125035 with right toe and 15429 with left toe. Either presser foot produces identical work, the two styles being furnished to meet the individual requirement of the operator. Fig. 154 shows presser foot 15429 with left toe.² These presser feet are fastened to the presser bar in the same manner as the regular presser foot, having the groove of the toe in line with the needle hole in throat plate.

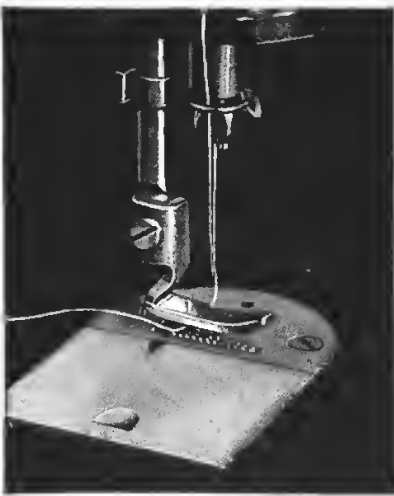


FIG. 154. The Cording Foot with Left Toe

To Use This Special Presser Foot.—The following operations are for edge cording, corded seams, and edge finishing.

For *edge cording*, fold the edge of the fabric over the cord and stitch close to the cord, guiding the work by hand.

For *corded seams*, fold the bias strip around the cord and insert the covered cord between the two pieces of fabric, with all raw edges together and the right sides of the fabric together. Then stitch close to the cord.

² Orders for these presser feet should specify the style number desired.



FIG. 155a. Edge Finishing

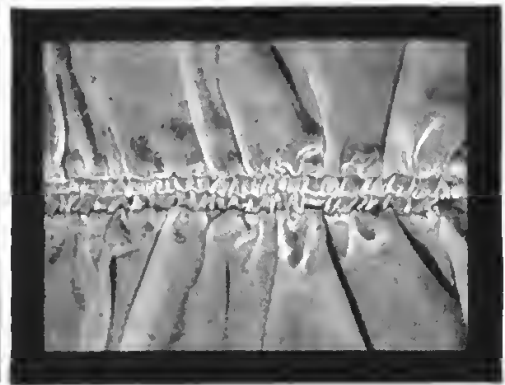


FIG. 155b. Shirred Cording

For *edge finishing*, such as neck and armholes, place the cord in the center of the bias strip and fold the bias strip around the cord, then place the fabric, with its wrong side up, over the covered cord, having all raw edges together. Stitch close to the cord.

Applying Slide Fastener.—To join a slide fastener to opening start at top, keeping fastener closed. Slash opening or have seam open the length required for fastener. Clip the end of slash diagonally about $\frac{1}{8}$ inch on each side. Turn edges under and baste. Press.

Place opening over fastener. Turn ends of fastener tape

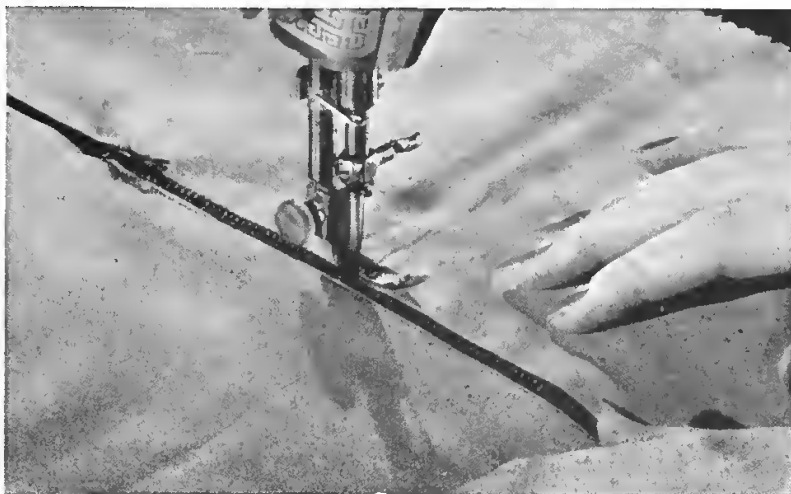


FIG. 156. Applying Slide Fastener

under. Stitch the opening to tape. Apply facing on the wrong side the same way. (Fig. 156.)

For an invisible closing at side seam, stitch bias facing to front, turn at seam and baste. Turn under back edge one-half seam allowance and stitch to fastener. Stitch edge of front facing to tape of fastener.

Tubular Trimming Attachment

Preparation of Material.—Bias strips of soft silk for tubing should be cut $11/16$ inch wide for smallest, $7/8$ inch for medium, and $1\frac{1}{8}$ inch for the largest size mentioned. If satin or heavier material is used, the strips should be a trifle narrower. Use a No. 11 needle, "A" silk, with a loose tension and long stitch.

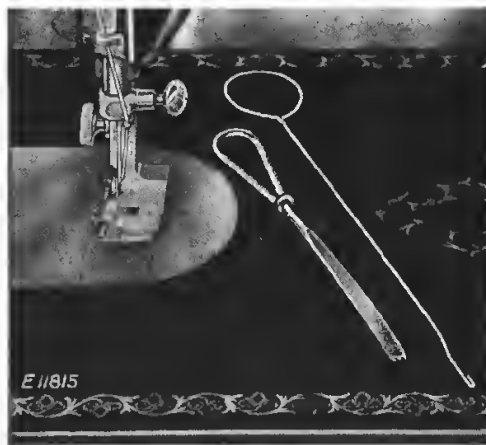


FIG. 157. The Tubular Trimming Attachment

To Attach and Use the Tubular Trimming Attachment.—Fasten the attachment to presser bar in the same manner as presser foot. With the stiletto, push the end of the bias strip, wrong side out, through the folder that surrounds the tube, draw the strip back from you 3 or 4 inches, then insert the threading wire through the tube from the front, and with this wire, pull the end of bias strip toward you through the tube. Start the machine, at the same time draw gently on the end of the strip which you have drawn through the tube.

Insert Filling Material.—As soon as the stitched portion of the strip has entered the back end of the tube, the end of the roll of filling material (which may be a roll of soft wool or cotton) can be placed against it and will be drawn in and covered as the strip is pulled toward you. The pulling must

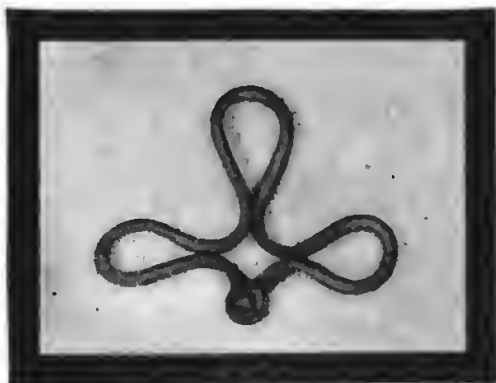


FIG. 158. Work Done by the Tubular Trimming Attachment

be as fast and even as the stitching. If the material pulls to one side, examine the position of attachment over the feed and adjust. Fig. 158 shows a sample of work done with the tubular trimming attachment.

Special Labor-Saving Attachments

List of Special Attachments.—The sewing machine that is equipped with all available attachments allows the making of trimmings that are in vogue from season to season and thus does not limit the home sewer in her choice of decoration for her garments. A list of these special attachments follows:³

Darning on the Sewing Machine	The Braider Presser Foot
stocking darning and table linen	The Blind Stitch Braider
The Shirring Plate	The Tubular Trimming Attachment
The Shirring Foot	
The Quilter	The Single Thread Attachment
The Underbraider	The Two-Thread Attachment
The Edge-Stitcher	The Pinker
The Hemstitcher	The Zigzagger
The Buttonhole Attachment	The Cording Foot
The Flange Hemmer	The Singercraft Guide

³ All these attachments are available for Singer sewing machine. Some of them can be bought for Willcox and Gibbs machines. They are not included with purchased machines.

The time required to apply many trimmings by hand, such as braiding and shirring, is greatly shortened by using the attachments. With an underbraider, an entire garment may be braided in a few hours. Another good example is the button-hole attachment—a buttonhole can be made in a few seconds.

In addition to the time and labor involved in applying trimmings by hand, work done with the attachments has that tailored finish found on the better ready-made garments.

Willcox and Gibbs Attachments

(Courtesy of Willcox & Gibbs Sewing Machine Co.)

The Guide.—Fasten guide *A* to cloth plate by guide screw *D*, as far from needle as you wish the sewing from edge of work

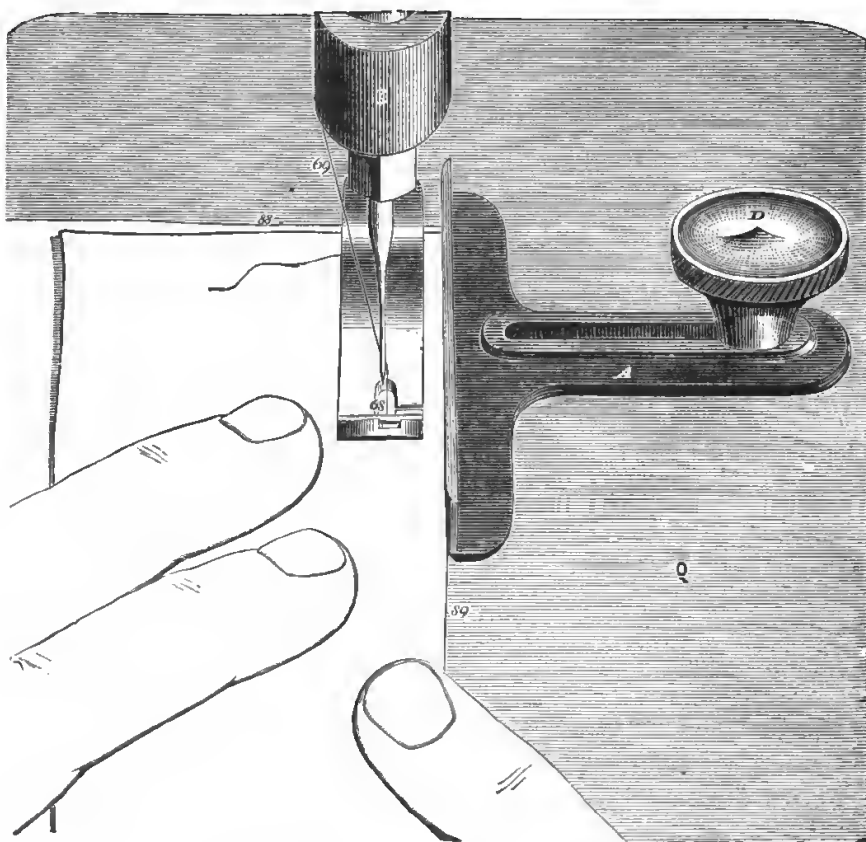


FIG. 159. Showing Use of Guide

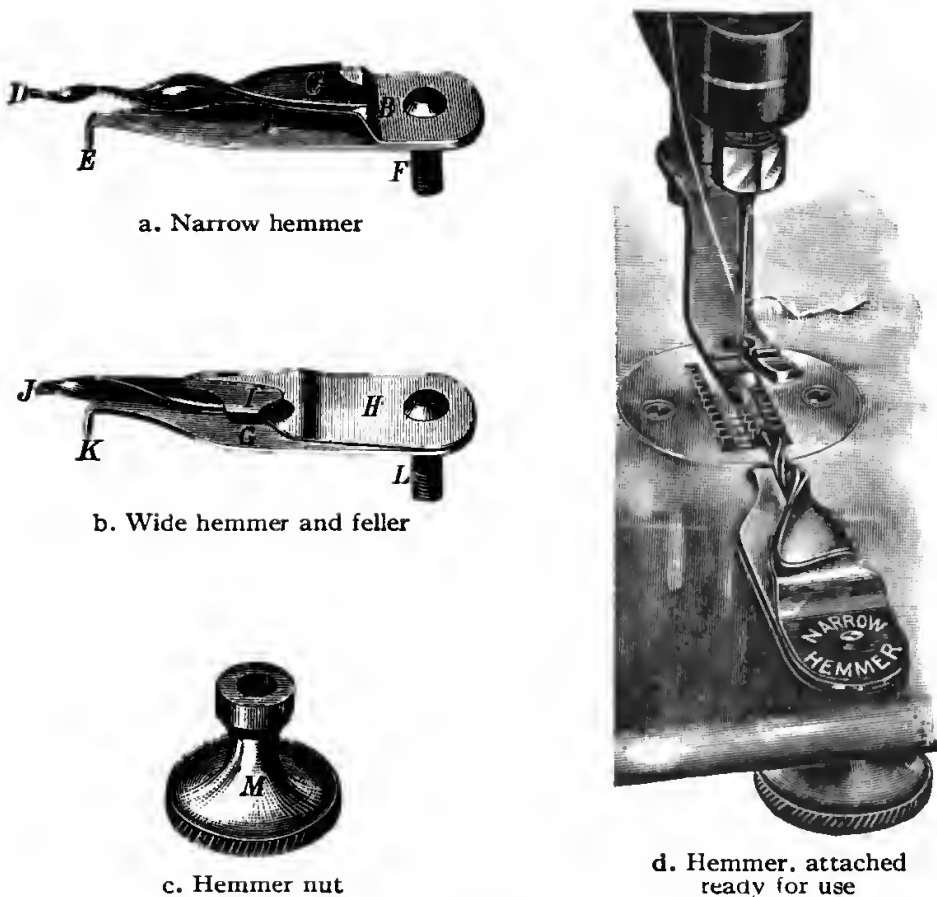


FIG. 160. Hemmers

The Hemmers.—Fig. 160 illustrates hemmers and the mode of attaching them to the cloth plate.

The narrower hemmer (Fig. 160a) turns only one width of hem, a very narrow one. The wide hemmer (Fig. 160b) makes hems of greater width, and it is also the feller. The hemmer nut (Fig. 160c) is used for attaching either hemmer to the cloth plate, as shown in Fig. 160d.

If necessary to take cloth out of hemmer before finishing, without letting it feed through, raise presser foot and pull cloth *from you*—not backwards nor sideways, or you will bend the hemmer.

No. 90 cotton is recommended for hemming.

As the feeding is somewhat retarded by the hemmer, use the next longer stitch to that indicated in table of stitches on cloth plate (see page 84 of *Attractive Clothes*). Thus, for 90 cotton, use 18 or 20 stitches to the inch instead of 22.

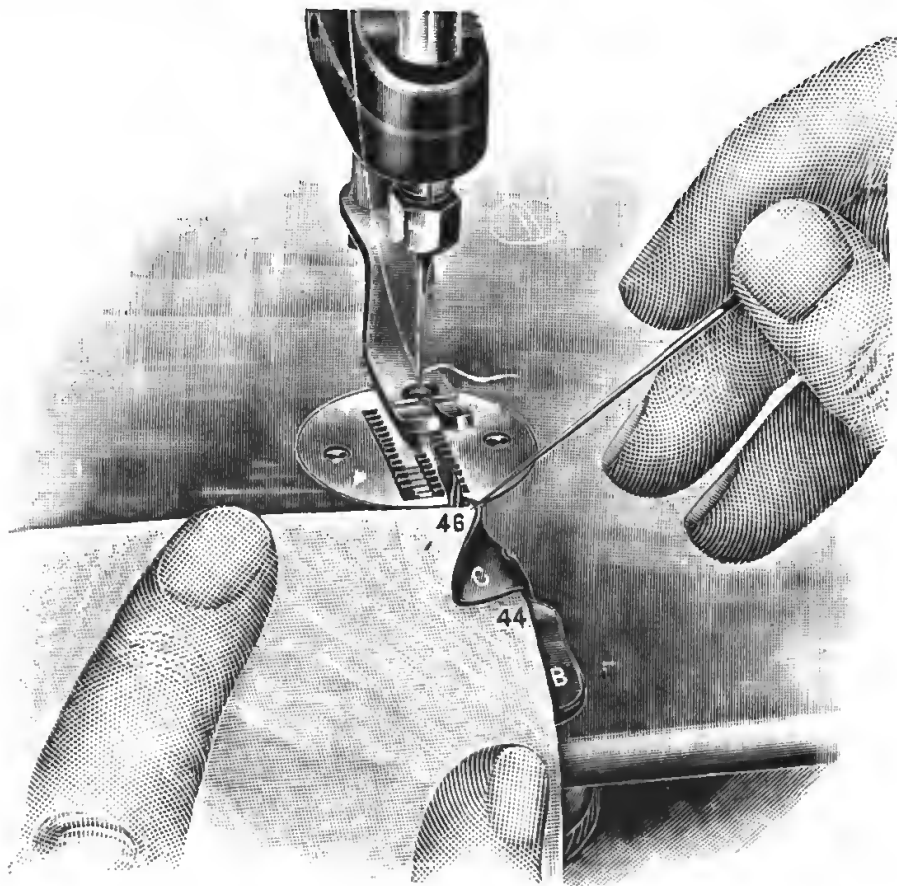


FIG. 161. Entering the Goods to Make a Narrow Hem

TO MAKE A NARROW HEM.—The narrow hemmer having been set and presser foot raised, pass the edge of goods which is to be hemmed, into the opening between the blades *B* and *C*. Then push goods forward, the right hand aiding with a pin inserted in the forward right-hand corner, until the front edge 46 is under needle. The foot is now let down and machine started, the edge of the goods being kept up against the turn 44 of the hemmer while passing through. When passing out of hemmer the *end* of goods will have a tendency to move to the left. This should be restrained by placing finger of left hand against it, as shown in Fig. 162, which will cause it to run out *straight* to end of seam.

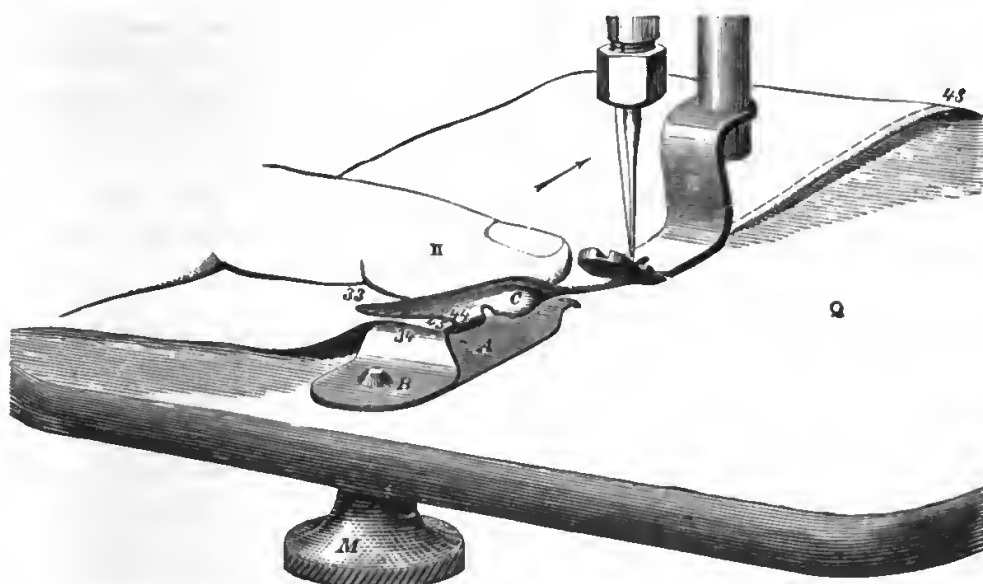


FIG. 162. Finishing a Narrow Hem

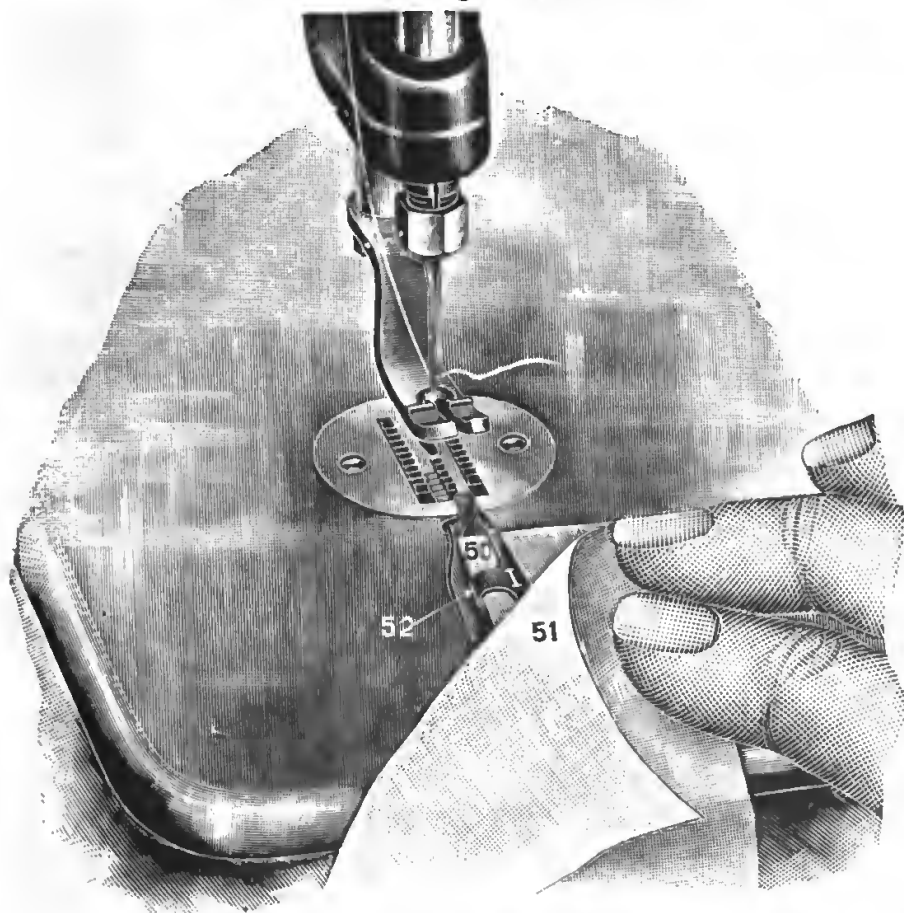


FIG. 163. Commencing a Wide Hem

TO MAKE NARROW HEM AND TO SEW ON TRIMMING AT SAME TIME.—First follow directions for making a narrow hem until “the front edge 46 is under needle”; then place end of lace or trimming under the hem below the needle, with edge of lace resting between base and blade of hemmer (Fig. 162, *A, C*). Then let foot down, start machine, and follow remaining directions. At same time, with finger of right hand, guide edge of lace toward the left so as to insure a perfect union of hem and lace.

TO MAKE A WIDE HEM.—The edge to be hemmed should be cut instead of torn. If the edge is stretched, through being torn or otherwise, the cloth where seam is sewed must be stretched to an equal length. The cloth must be folded down evenly, and distinctly creased, a little wider than width of hem desired. The work is then placed in hemmer, fold 50 (Fig. 163) entering under upper blade *I*, and fold 51 passing over it. The edge of cloth is kept up against the turn 52 of upper blade during process of stitching the hem. This is generally done by aid of the guide *A*, as shown in Fig. 164, which serves to guide the work and hold the edge in hemmer.

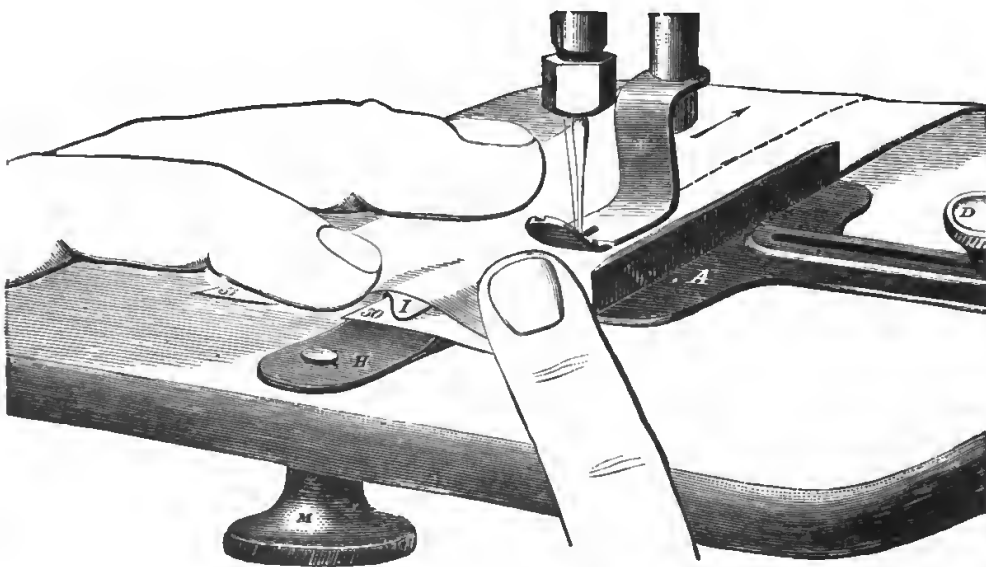


FIG. 164. Finishing a Wide Hem

Gathering.—The gatherer can be used for gathering all kinds of soft material, wool, cotton or silk.

Slip gatherer on presser foot, until it touches wire on upper side, as shown in Fig. 165.

Willcox & Gibbs thread must always be used on their machine when gathering.

When gathering, *and only then*, thread machine as shown above, *leaving thread out of Pull-off 1*, in lever, and drawing it direct from spool into groove between the washers of automatic tension 2, then to thread pin 3, etc., as usual. See that spool turns freely on spool-pin.

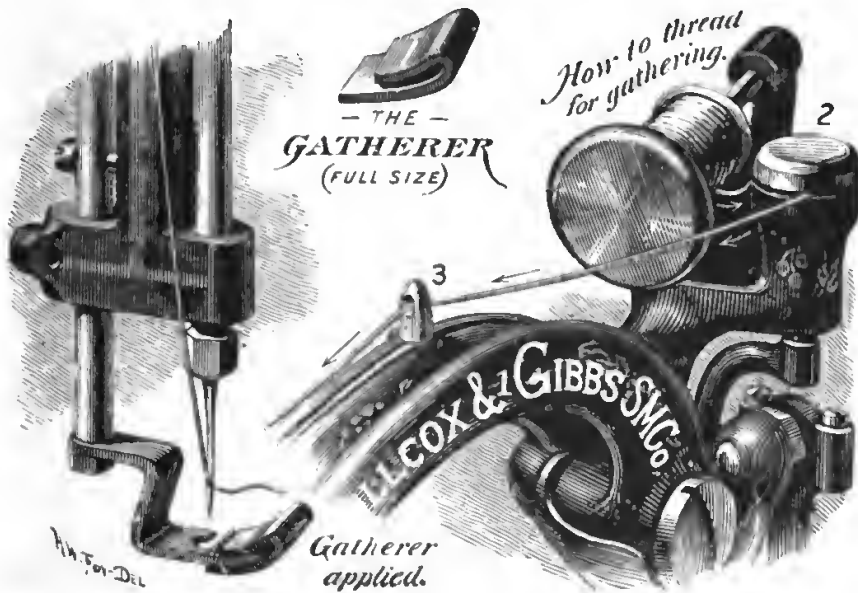


FIG. 165. Shows Foot Gatherer (Full Size), and as Applied to Presser Foot, also How to Thread for Gathering

Place work under presser foot and commence to sew, allowing it to feed freely, using from 12 to 16 stitches to inch, according to material and fullness desired.

If it does not gather full enough, either lengthen stitch, or increase tension, by taking hold of thread between automatic tension 2, and thread pin 3, and winding it one or more times around in groove between the washers of automatic tension—but not more than three times in all.

If too full, shorten stitch, or unwind thread from automatic tension.

The fullness of gathering depends on softness of goods, length of stitch, and number of times thread is wound around the automatic tension.

For nainsook, 13 stitches to the inch, No. 80 thread, and *two turns* of thread around automatic tension.

Ruches of ribbon, silk or chiffon, so much used in dressmaking, can be made with the foot gatherer. The degree of fullness should be regulated according to preceding directions.

When gathering chiffon or net, thread machine as for regular sewing, that is, according to directions on page 83 of *Attractive Clothes*. You will, however, take *two turns* of thread around automatic tension, using 80 cotton or O silk and 12 stitches. This will not tear the goods.

If several rows of gathering or the shirred effect be desired, use the quilter as a guide.

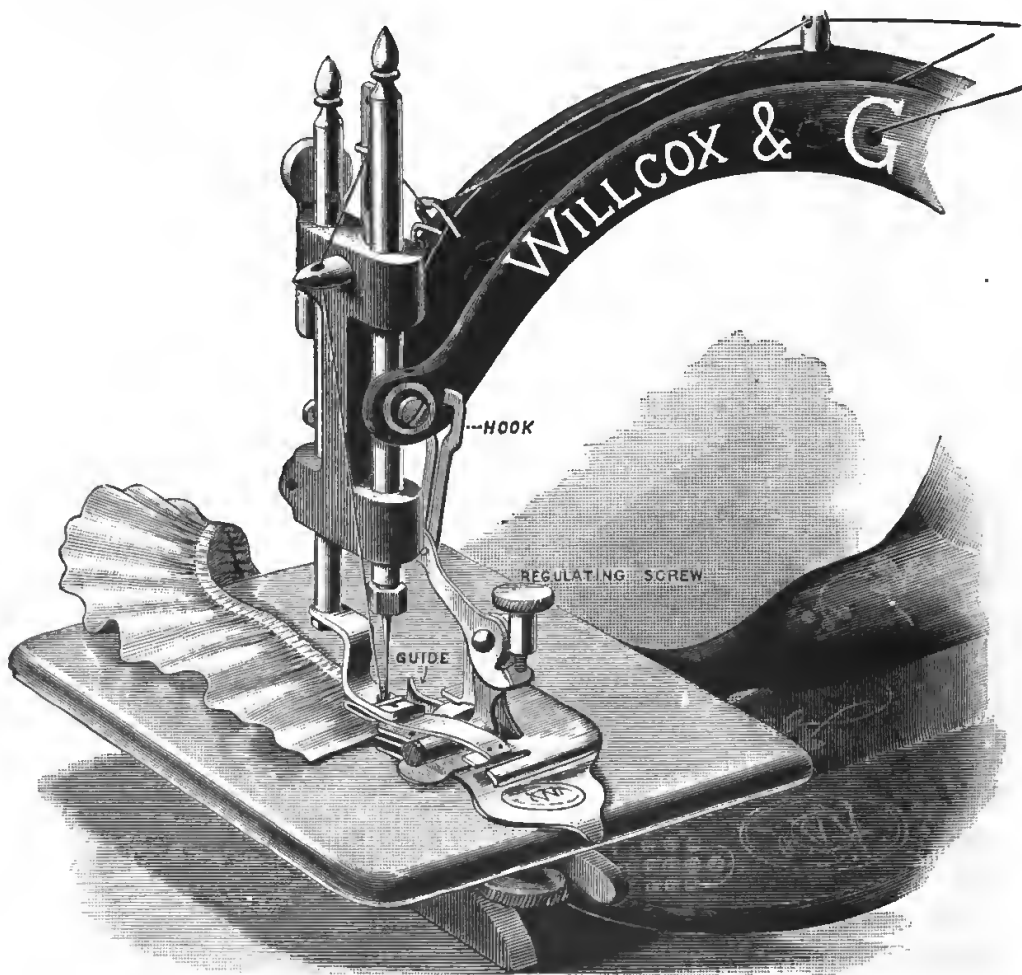


FIG. 166. Ruffler

Improved Ruffler.—Place ruffler on machine (Fig. 166), using hemmer nut to fasten it firmly to plate.

HOOK.—Then place hook at end of link in hole in arm by pressing spring to right so as to pass behind arm and hold hook in place.

GUIDE.—Set movable guide as far from needle as width of heading desired.

REGULATING SCREW.—Regulates fullness of ruffle. If more fullness is required, turn to right; if less, turn to left. Place goods to be gathered between the blue blades, as illustrated. In order to have the gathers even and regular, hold material lightly so that work can feed through freely. To gather and sew on band at same time, place band under blue blades. When gathering, use 30 stitches to an inch. When gathering and sewing between bands, use 27 stitches.

A drop of oil applied occasionally on the rivets or bolts of the lever will prevent wear.

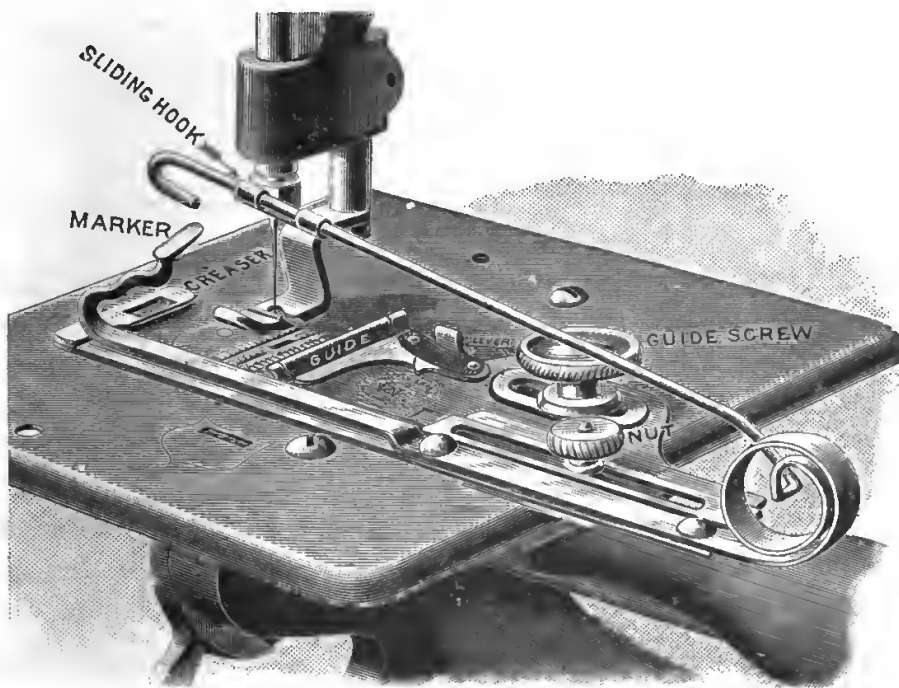


FIG. 167. Shows Guide Adjusted for Wide Tucks

Improved Tuckmarker.—Place the tuckmarker on machine as shown in Fig. 167, using guide screw of machine to fasten it.

NARROW TUCKS.—The guide on tucker, in box, is already adjusted for making tucks less than $\frac{1}{8}$ inch wide. See Fig. 168.

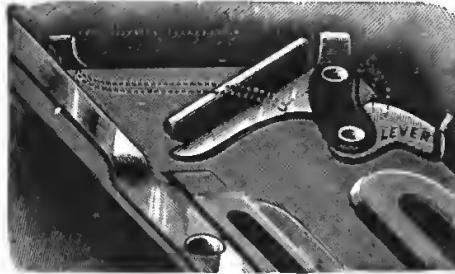


FIG. 168. Shows Guide Adjusted for Narrow Tucks

WIDE TUCKS.—Close opening in guide by swinging movable part of guide to left, then lock it by pushing small lever to left. See Fig. 167.

GUIDE.—Set guide as far from needle as width of tuck desired; then loosen nut and move creaser twice that distance from needle for tucks without any space between them. To have space between tucks, move creaser as much farther from needle as space desired and fasten firmly with nut.

SLIDING HOOK.—Place hook around needle to operate marker.

Fold cloth for first tuck, place it under marker and against guide, and proceed to sew. After sewing first tuck, open seam by scratching with fingernail on under side while holding it stretched apart. This will flatten and press down tuck into proper position; then fold cloth on the crease just made for next tuck.

In entering cloth for second and all succeeding tucks, crowd it well against guide and draw it a little towards you before lowering presser foot. This will cause edge of last made tuck to rest on cloth plate, and pass along *under* the creaser.

See that edge of last made tuck is in this position before commencing to sew, for if it rests on top of and passes *over* creaser, a good crease will not be made, and the edge of tuck being sewed, will not keep up against guide, causing variation in width of tucks.

The Binder.—Attach binder to the machine by loosening thumb screw and fitting clamp on to the shoulder of the presser foot close to the foot bar (tilting it slightly will facilitate this). Adjust binder so that there is sufficient space between the toe of presser foot and binder to allow material to feed easily. (Fig. 169a.)



FIG. 169a. The Binder

For double-turn binding, insert the bias material, which can be prepared by use of cutting gauge, around the scrolls as in Fig. 169b. It can be more easily inserted by cutting to a point and drawing forward to needle with bodkin or long pin. Stitch for a few inches and observe just how close to the left, or inner edge the

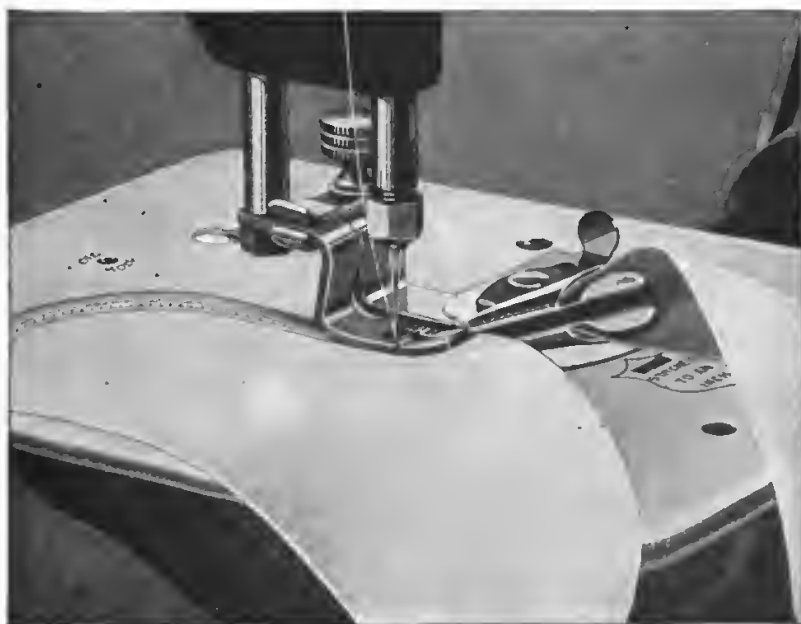


FIG. 169b. Binder in Operation

stitching appears on the binding. If the distance from the edge is not correct, this can be adjusted by moving the binder to the right or left by means of the lug at the left side.

With binder perfectly adjusted, feed the material to be bound between the scrolls of the binder, as shown in the illustration, a study of which will give a clear understanding of the operation.

For single turn binding, $\frac{1}{2}$ inch wide, such as folded tape and military braid, the braid or tape, instead of being inserted as shown in the illustration, is fed into the slot at the right of the binders.

Value of Safety

The safety of the student during operation of the sewing machine is of prime importance. Over and above the human aspects of the situation, the teacher has a legal responsibility to provide for the protection of her pupils.

Guards for the needle should be attached to each machine and their use required on all occasions. Safety instructions



Courtesy Singer Mfg. Co.

FIG. 169c. Needle Guard

and practices should be demonstrated by the teacher continually, so that the student may become safety-minded and guard herself from possible injury.

The attitude of the student is largely a reflection of that of the instructor. To be effective in this most vital instruction, the teacher will build a steady cooperative emotion toward safety in her group through example and through definite and specific instruction in posture at the machine, in the method of use and control of the machine in operation, and in the care of it when not in use.

A safety education plan is as necessary a part of the teacher's preparation as her dressmaking plans.

Safety Precautions in Using the Sewing Machine.—Governmental agencies, industrial establishments, insurance companies, and school authorities can furnish statistics on the lamentable increase in the number of accidents in the garment industry among home sewers and in dressmaking classrooms during the last decade.

Accidents will occur wherever machines are used, but the number of injuries and the degree of injury can be greatly reduced if the operator will give careful attention to the machine while working on it. There is usually a human fault involved in a machine accident, and most often it is negligence.

If a few simple rules are observed continually, safety precaution becomes a habit which may save you pain, loss of time, and possible permanent injury during your school years and later in industry.

1. Learn from your teacher the safe uses of the machine and also the hazards involved in its use.
2. Do not use the machine without a needle guard.
3. See that the needle, presser foot, or any attachment being used is securely adjusted.
4. Keep an erect sitting posture. Face the machine squarely when working.
5. Do not stoop towards the machine; it is not necessary. Long hair, bracelets, necklaces, and scarfs caught in the wheel of the machine have caused regrettable accidents.
6. Keep your eyes on the machine while operating it. Do not turn your head to speak to others while the machine is in motion.
7. Run the machine at a moderate rate of speed. Do not race it "for fun" when not stitching.

8. Turn off the power of the electric machine or keep the feet off the treadle of the foot-power machine when threading or oiling.

9. Place the needle in the material and lower the presser foot before beginning the stitch.

10. Keep the top of the machine free of everything but the material to be stitched.

11. Be sure that all pins are removed from the seam before beginning to stitch.

12. Do not force the machine if it does not work smoothly. Report the matter to your teacher. Warn other students away from the machine until it can be adjusted.

13. Stop the machine before raising the presser foot.

14. Draw the material gently away from the needle. A bent needle may break and cause a serious eye accident.

15. Do not place the fingers too near the needle even if it has a guard.

16. Report all accidents immediately to your teacher.

17. Help other students to become safety-conscious.

Observe the A B C of safety—Always Be Careful.

QUESTIONS

1. (a) Explain how to use the bias gauge. (b) What is the chief advantage to be claimed for its use?

2. Describe the correct way of joining bias strips. Why is this procedure of such importance?

3. How is the binder attached? What precautions are necessary in its use?

4. How is the binder adjusted to be certain of accurate binding? How adjusted for (a) curved edge, (b) a placket, (c) a scalloped edge?

5. What precautions must be taken when binding soft fabrics?

6. Explain how to apply a French fold.

7. Suggest at least six garments on which binding by machine may be used.

8. (a) Give a practical method of starting to use the foot hemmer. (b) What will be the effect if too much cloth is fed into the hemmer?

9. What advantages may be claimed for the use of the bias cutting gauge?

10. What is the purpose of the cloth guide in a sewing machine equipment?

11. Explain two ways of starting to sew with the foot hemmer.

12. Tell what precautions must be used in hemming with the foot hemmer.

13. Explain how to prevent sheer material from stretching while using hemmer.
14. Explain the advantage of using the adjustable hemmer.
15. (a) Name the parts of the machine tucker. (b) State the use of each part.
16. In adjusting the tucker to the machine, what precaution must be taken?
17. How must the stitch be regulated for the machine tucker?
18. Explain how to be sure of even tucks.
19. List the parts of the ruffler. Explain their uses.
20. Tell how to adjust and care for the ruffler.
21. How is the fullness of the ruffle determined?
22. Describe other uses of the ruffler.
23. Explain how to adjust the ruffler for plaiting.
24. List special labor-saving attachments for the sewing machine.

REFERENCES

- A Manual of Family Sewing Machines and Their Attachments. The Singer Sewing Machine Company.
- Machine Sewing, Attachments, Willcox and Gibbs.
- Univ. of State of N. Y. Ind. Teacher Training Div. Circular of the Board of Education.
- Weaver, Ericsson and Tighe. Organization and Management in Trade Shopwork Classes.

CHAPTER 11

FABRIC DECORATION—STRUCTURAL DESIGN

Elements of Textile Design.—In Chapter 8 we discussed the difference between surface and structural designs and went into great detail about surface designs.

This chapter will consider carefully the whole question of the evolution of decoration in fabrics through structural design.

Since the beginning of history, people have expressed their artistic instincts through designs in fabrics. On simple hand looms, elaborate designs have been wrought. The three primary elements of textile design are weave, combination of form, and blend of colors. They enter either separately or in connection with each other into every species of fabric. *Weave* relates specifically to the build or structure of the cloth, and is an indispensable factor in any type of fabric. Schemes of weave will produce, in one operation, an even and firm cloth decorated with a type of pattern that usually consists of minute parts, but which is pronounced and decided in combination. *Combination of forms* is a surface decoration obtained by uniting straight and curved lines.

Color brightens and improves the qualities of the design. In fact, the discarding of color would diminish the elegance of the design, impoverish its appearance, and would practically destroy the woolen industry. For example, think of fabric such as plaid or tweed without coloring. Whether the pattern be stripe, check, figure, or intermingled effect, it obtains its outline and detail from the methods of coloring adopted. In worsteds there is a larger diversity of weave design than in woolens; but still, colors are very extensively used to develop effects due to weave and form, and also to impart a cheerful and lustrous appearance to cloth.

Patterns in dress fabrics, shirtings, and other articles made

entirely of cotton are frequently combinations of fancy shades. Fabrics composed of silk and other materials, including silk ties, handkerchiefs, etc. (the cloths in which fancy shades are used), show that coloring and its combinations in all designed woven products are the qualities which give tone and character to the styles. Though the cloth may be soft to the touch, substantially made, of uniform structure, and skillfully finished, yet a lack of brightness and elegance in coloring so powerfully detracts from the appearance of the pattern that these qualities alone are not sufficient.

The various methods of employing fancy shades in patterns obtained in the loom may be briefly summarized:

1. In mixture cloths, for suitings, coatings, etc.
 - a. By combining or blending various colors of materials.
 - b. By combining several classes of twist (crepy) threads.
2. In plain, twilled, and fancy weave designs for trouserings, coatings, suitings, jackets, dresses, costumes, flannels, shirtings, etc.
 - a. By introducing colors into the warp, forming stripes.
 - b. By introducing colors in the filling, producing spotted patterns.
 - c. By introducing colors into both warp and filling, giving checks, broken stripes, etc.

Types of Designs.—The types of design we shall consider are the following structural designs.

PLAIN WEAVES.—Examine the following fabrics very carefully with a pick glass and note the manner in which the decoration or pattern is found in the fabric. While the plain weave itself is not attractive, it can be made so by the following.

REPP FABRIC.—It is a plain weave with thicker yarn at a stated distance in the warp. It gives an attractive appearance and gives length to the fabric.

POPLIN FABRIC.—It is a plain weave with thicker yarn at stated distances in the filling. It adds to the attractiveness of the fabric and gives a feeling of fullness or increased width to the fabric.

CORDED CHECKS.—There are many fabrics of a plain-weave structure with cord effects in both the warp and filling which give a delightful check design to the fabric.

CHAMBRAY EFFECTS.—A very attractive light-colored fabric of a plain weave may be formed by a white filling with a colored warp.

GINGHAM EFFECT.—A checked effect may be produced by having a colored yarn in both warp and filling.

COLOR STRIPES.—Attractive designs in colored stripes may be produced by inserting a colored yarn at stated distances in either warp or filling.

CREPE EFFECTS.—Very attractive crinkled effects in either dull or semi-luster may be made by weaving alternating with left-hand twist yarn and right-hand twist yarn in either the filling (crepe de Chine effect) or both warp and filling (georgette crepe effect).

TWILL WEAVE.—A distinctive oblique line at various angles may be woven by the twill weave with marked effects in worsteds. The angle of the twill most commonly used will be 45° , if the construction number of threads to the inch in both warp and filling is the same.

SATEEN WEAVE.—Sateen weave gives a very distinct luster to the fabric. It is possible to arrange two different yarns so that silk on the face (filling) and cotton on the back (warp) will give a silk fabric on the face side with a cotton back.

JACQUARD WEAVE.—Look at the elaborate design of linen damask with a pick glass and note the fineness and beautiful effects of the design produced by weaving. The fabric represents combinations of sateen and twill weave of linen or silk or rayon with patterns of large and dignified types of flowers, berries, fruits, or ornamental scrolls. The ground is satin weave, while the pattern is brought out by either a three-harness or four-harness twill in relief. The comparative dullness of the twill weave (due to the twist of the yarn) contrasted with the high luster of the satin weave gives the desired effect. In the silk or rayon fabrics, the effect may be

produced by different colors. The warp and filling are thrown on the surface at right angles, which causes the play of light upon the fabric, distinguishing the pattern from the ground. A large dignified motif is better than a small motif for damasks.

DOUBLE-CLOTH WEAVE.—Notice a heavy men's overcoating with a different back from the face. Note also the attractiveness of the back of the cloth. This difference is made possible by a double-cloth weave. Such a structure allows great freedom for the formation of colored patterns which may or may not correspond in design on both sides.

LAPPET WEAVE.—Embroidered effects, such as dotted swiss, can be woven on a fabric by means of a lappet attachment on the loom. Such a weave structure is limited to small detached spots or various and continuous figures running in stripes.

GAUZE WEAVE.—An open-work structure of fabric with reinforcements for strength as marquisette cloth can be developed by gauze weave.

The detail structure of fabrics has been considered in great detail on pages 181 to 198 of *Attractive Clothes*.

FANCIES OR NOVELTY WEAVES.—The above weaves are produced each season as staple fabrics in different fibers—cotton, wool, silk, etc. Modifications of these weaves are made each season and are called fancies. The fancies may be due to changes in composition, such as a mixture of silk, cotton, spun rayon, and long filaments, to produce a cheaper fabric or one with a slight difference in luster.

Fancies are fabrics produced to meet the demands of style. They may remain in favor a year or two. The fancies are fabrics differing from staples in weave, color, and fiber content, and are produced through: (1) variation of weave; (2) variation of color; (3) variation of color and weave.

To illustrate: brocades. Coloring includes: stripes, checks, plaids, melanges, mixtures.

Good Designs.—The following facts underlie the principles of good design in fabrics:



1. Motifs of the same size and proportion of color appear monotonous. Hence motifs should be different—sizes and color should vary in space and intensity to add interest. This applies particularly to dots, stripes, checks, and plaids.

2. Motifs should have unity in all parts.

3. There must be harmony of line, shape, and proportion in the motifs.

4. The design should not be too large to be covered completely by folds, either on the dress or in upholstery.

5. Motifs should be adapted to the purpose and the mode.

6. Designs on fabrics should not be too conspicuous or command attention from the whole composition (whether it be a costume or a room).

7. The colors should be suitable to design and usage.

8. The design should be adapted to the wearer. For example, large motifs or patterns are not suitable for large or stout people.

Psychological Value of Fabrics.—Notice the strong appealing influence that is really emotional in character in fabrics or costumes which differ according to the (a) composition, (b) weave, and (c) finish. *To illustrate:* Look at a sheer—a georgette or chiffon—that is cut to meet the requirements of the person and see if it does not attract us, has a flattering allure. Then look at an elaborate velvet and see how the velvet gives a quality that inspires dignity, loftiness, and reverence, and that is reminiscent of royal costuming.

Metal cloths convey suggestions of military spirit or ambitious display, as well as richness and luxury. Furs give one the impression of richness and elegance—splendor. Fabrics of linen are forceful and active in appearance, and give the impression of efficiency. Organdy in its freshness we associate with youth. Serges always convey the idea of durability, due to the tightness of weave; hence, they suggest service. Broadcloths are one of the oldest fabrics and give a conservative, mild impression; hence, we associate broadcloths with genteel or well-bred people.

Classification of Fabrics by Use.—Fabrics may be divided into two classes according to use: (a) dress fabrics made for clothing, and (b) decorative or upholstery fabrics used for home furnishings. Dress fabrics have already been described.

Decorative fabrics, sometimes called upholstery fabrics, include cretonnes, chintzes (which have already been described under surface decorations), art denim, cotton plush, corduroy, repp, chenille cloth, silk damask, tapestry, plush, velvet, velour, netting, scrim lace, sateen, and brocatelle artistically arranged for hangings, curtains, cushions, furniture coverings, etc.

HEAVY FABRICS.—Generally speaking, the heavier fabrics, such as damask, velour, tapestry, repp, chenille, art denim, ticking, cotton plush, etc., are used in the form of curtains or draperies for doors and archways, while the lighter fabrics, including silk satin, silkline, chintz, cotton crepe, and tapestry prints are used for window draperies, furniture decorations, pillows, cushions, and small furnishings.

Repp is a corded fabric in the length but is not as beautiful as damask. However, it is durable and is used for draperies and couch covers.

Cashmere Cloth is a decorative fabric similar to pongee, in either wool, mohair, cotton, linen or silk, used for curtains and shades. It resists dust and the sun and is easily washed.

Tapestry is the most durable of decorative fabrics because the interlocking of warp and filling is complete, making a fabric that will not ravel and that dust and moths find difficulty in destroying. The price varies according to the composition, size, and design.

DECORATIVE FABRICS USED FOR DRESS GOODS.—Within the last few years, the creators of women's fashions have appropriated many of the upholstery fabrics formerly devoted solely to the use of the decorator, and have taken them for use in clothing. Brocades, tapestries, etc., in addition to the surface-decorated fabrics (chintzes, cretonnes) and all sorts of similar fabrics, have appeared as frocks, smocks, coats, evening wraps and dresses, as well as bathing suits.

History and Development of Fabrics

History of Spinning.—Until about 250 years ago the rude method of spinning with the distaff and spindle still employed in India and Egypt was the only one known in Europe or America. For 4,000 years the same simple instruments, worked in almost precisely the same manner, had been used without a thought of improvement.

In 1620 an Englishman conceived the idea of the spinning wheel which then superseded distaff and spindle. The spinning wheel when first invented was the same in construction as it is today, consisting of a wheel, band, and spindle, and driven either by hand or treadle. There were two kinds of spinning wheels in common use, the large wheel for spinning wool or cotton and the small wheel for spinning flax. By the spinning wheel only one thread could be produced at a time, and the most arduous toil could not reel off more than a pound in a day. After the introduction of cotton in England, and as the demand for cheap cotton fabrics increased, several efforts were made to facilitate the process of spinning yarns. In 1767 James Hargreaves, a weaver of Blackburn, England, produced the power spinning machine by use of a series of spindles, instead of one operated by one person, thus increasing the production per person.

Two machines were used: the mule spinning frame and the ring spinning frame. The former gave a more elastic yarn with less luster, while the latter gave a more highly lustered yarn. Thus, we have today two sets of yarns: (a) a soft elastic yarn spun on the mule, and (b) a hard-lustered yarn spun on the ring spinning frame.

The ring spun yarn is stronger and more even than mule yarn and better adapted for warps; but the range is limited, the counts seldom exceeding medium size (No. 40's), though mules are made capable of spinning finer yarns up to 80's and 100's. The reason is that the fine thread has not the strength to stand the "drag" or tension required in the hard twisting of the yarn on the bobbin. The mule, on the other hand, will

spin both warp and weft, and as high as No. 100's or more, while still finer numbers can be spun by hand mules.

History of Weaving.—Weaving, or the interlacing of thread, has a remarkable history dating from earliest times.

Apparently the varieties of woven cloth are endless, but these differences are due only in part to the method of weaving. The textile materials employed, the methods of spinning and preparing the yarns, the dye colors resorted to, and the finishing process may vary indefinitely, and so contribute to give variety and character to the woven cloth. The complexities of the art of weaving, in itself, are reducible to a few fundamental operations which do not, of necessity, demand intricate machinery. For producing the India muslins of the present day with their marvelous delicacy of texture, and also for the elaborate and sumptuous shawls of Cashmere, the native weavers have only rude and simple looms. With all our boasted civilization and modern appliances, we have been as yet unable to rival the Hindu and other "heathen" nations in the production of fine textile fabrics. But patient and tedious handwork, in these instances, is devoted to produce effects which modern machinery can imitate with almost as great rapidity as in the case of the plainest fabric. The series of inventions which have led up to the ingenious power looms of the present day, began with the invention of the fly-shuttle in 1733, and culminated with the Jacquard appliance in 1802. The principle of Jacquard weaving has never since been improved upon.

Of course, automatic devices and electric eye attachments have allowed one weaver with a bobbin boy to take charge of as many as 150 automatic cotton looms, thus increasing the production of a weaver many many times as compared to a weaver running two or four power looms, or weaving a single hand loom.

Ancient Fabrics.—Fabrics according to the period of development may be classified as: (a) ancient, up to the fall of Rome in 472 A.D., (b) Middle Ages from 472 A.D. to the 14th

century, (c) Renaissance, from the 14th century to the latter part of the 18th century, and (d) modern times from that time.

The period of ancient times saw a social system of slaves and freedmen and nobility.

Under this system the work of spinning and weaving was carried on by members of the household for the purpose of supplying the family with clothing. There were no sales of the product. Each class in society, from the peasant class to that of the nobleman, had its own devices for making clothing. This was the system that existed up to about the 10th century. The supply of clothing was limited.

The fabrics we have today are the result of the inspiration of the different countries at the different periods of history. The ancient people, particularly the Oriental races, left us beautiful fabrics in silk, cotton, linen, and wool; and, in some cases, leather fabrics.

The Oriental people were not only gifted in the field of spinning, weaving, and dyeing, but also in designing. Note the contributions of the following races.

Since the Egyptians lived in a warm country they used light and translucent clothing of both fine and coarse cotton and linen fibers. They made, with their simple implements of spinning and weaving, finer fabrics than have been made with modern power machinery. They preferred linen fabric, due to its permanent value which was associated with their religious belief of immortality.

The Chinese invented fabrics with silk weaves that gave soft textures, soft satins, soft velvets, soft brocades, damasks, taffetas, and China silks and embroideries.

Japanese designs are similar to Chinese, due to the commercial intercourse and exchange of ideas.

The Hindus developed cotton and spun the cotton to a very fine degree. They made excellent fabrics noted for durability, design, and coloring, especially the knot tie dyeing and batik fabrics. Gingham, printed cottons, and beautiful silks and shawls were produced.

The Greeks used cotton, linen, wool, and silk fabrics which were made into costumes allowing great freedom, as compared to the rigid styles of the Egyptians. Since the Greeks emphasized draping effects, they developed crepe-like weaves in their fabric, due to its adaptability to draping.

The early Romans were a race of shepherds, and the women of higher classes wove the cloth in their own homes. When Caesar invaded England, he found in the southern part of the island people acquainted with the spinning and weaving of wool and linen.

With the simplest hand processes of cleaning and spinning, very fine yarns were made.

The Romans with their slaves, freedmen, and nobility wove their fabrics not only from cotton and linen, but also from wool. With the downfall of Rome, the art of weaving cloth in Europe was almost lost, and people again wore furs and skins.

For centuries, fabrics were made from these four major fibers.

Fabrics of the Middle Ages.—We now turn to the fabrics which the Middle Ages contributed to the progress of the industry.

WESTWARD TREND OF INDUSTRY.—As civilization passed from the East to the West, Asia and Egypt gave to Greece and Italy the knowledge of spinning, weaving, etc. Italy and Greece used the information and then taught Spain, France, and Flanders (Belgium) the art of weaving wool and cotton.

Later, Germany received the textile arts—spinning and weaving—and passed them on to England and northeastern Europe. Thus, by the 10th century the English were spinning and weaving the wool from their flocks with much skill—although not equal to that of the French and Flemish.

With the invasion of William the Conqueror in 1066, came a large immigration from France, that settled in the part of England opposite the Irish coast. The new immigrants, and later ones during Queen Elizabeth's period, increased the skill

of the weaving and laid the foundation of the great textile centers of England—Lancashire and Yorkshire.

ORIENTAL TEXTILES.—The Orient gave to the Middle Ages a wealth of textiles that were used to inspire new fabrics. *To illustrate:* Arabian patterns had a distinctly ornamental style of their own, and showed a good variety of naturalistic and conventionalized patterns, including parrots, peacocks, lions, tigers, elephants; also, the well-known Indian pine forms, which, no doubt, were derived from the Persian style.

The Arabians were originally a people of the desert, and lived either in tents or houses. The desire to make their tents and homes attractive led to many notable achievements in decorative textiles. Doors and openings had hangings of decorative draperies, and they made rugs and carpets to sit upon. The walls of their tents also were covered with tapestries. The Arabians' mode of life afforded considerable leisure, and they found opportunities to express their ideas of art in beautiful textiles and fabrics. The scenes and colorings were taken from their religious beliefs. These beautiful fabrics are due to their mode of living.

The Arabians' designs in textiles were based upon geometrical figures interlaced with ornaments without floral patterns. This was inspired by their religious beliefs, but they were beautiful in form and detail. They influenced the weaves of the fabrics of the Spanish people that gave us beautiful decorative fabrics such as silk damask—Spanish 15th century.

Brocades and brocatelles were used extensively in the 16th and 17th centuries.

Hindu textiles influenced the fabrics of the Middle Ages. Indian textiles for centuries were unique in the excellence of their colors and dyes, beauty of materials, and perfection of manufacture, but in later years they have to some extent lost their distinctive character through the influence of European designs and the introduction of aniline dyes. Thus cheaper forms of Indian goods have been placed on the market.

Some of the earliest examples of printing or staining on cloth were produced in India and, coming westward, reached

Egypt, Asia Minor, and the Levant, but the art was not practiced in Europe until the 17th century. In the early days cloth printing was done in a primitive fashion. Engraved blocks of wood were daubed with a color pad, and the design struck on the cloth. The finer designs were formed on the wood blocks by suitably shaped pieces of metal. A separate block was required for each color in the pattern. Hand block printing is practiced today in a manner similar to this.

SARACENIC DESIGNS.—In a similar manner the fabrics of the Saracens' inspirations influenced the textiles of the Middle Ages and have influenced us today.

EUROPEAN FABRICS.—The Oriental people developed new fabrics and designs up to the Middle Ages—then they stopped and only repeated the old fabrics. The European countries and the cities of northern Italy, particularly Milan, took up the creation of fabrics at this time and became the style centers of fabrics, as well as costumes.

During this period the felted fabric was discovered and used for making hats. Lace was also invented and gave the people a chance to make old clothing attractive by means of lace work and other forms of needlework.

Among the fabrics developed during this period in addition to the fabrics of ancient times were: (a) batiste; (b) broadcloth; (c) flannels; (d) fustian; (e) diaper, etc.

The people of France and England used in the Middle Ages about the same clothing as the Romans and Greeks. The Germans used skins and crudely woven fabrics which later developed into peasant costumes highly colored and picturesque.

Fabrics of the Renaissance.—During the Renaissance in the early part of the 14th century, France, particularly the cities of Lyons and Paris, took the honors of making and designing textile fabrics from Italy. Due to the wealth of the people elaborate clothing, composed of brocades, damasks, and velvets, encouraged the manufacture of textiles. The men dressed more elaborately than the women. The invention of

the knitting machine gave us another clothing structure elastic and strong and especially adapted for hosiery.

Among the fabrics developed during the Renaissance, in addition to those already mentioned in the previous periods, were: (a) cretonnes, (b) cottons and prints, (c) worsteds of various kinds, (d) variety of woollens, (e) baize, (f) jersey, (g) corduroy, (h) jersey cloth, (i) bombazine, (j) buckram, (k) laces, (l) more elaborate laces.

Fabrics of Modern Times.—With the invention of the power textile machinery at the close of the 18th century and the marked improvements made in them during the 19th century, it was possible with this power machinery for one person to do the same amount of work as 40,000 people in ancient times. This rapid advancement in mechanical processes, with the discovery of synthetic dyestuffs of various kinds with varying properties of fastness, gave our modern era textile fabrics of attractive designs within the purchasing power of poor people.

NEW FIBERS.—During the past generation, chemistry has made vast strides in synthetic fields by producing new dyestuffs and new fibers; also in the utilization of fibers from rabbits, camels, and goats in making new weaves.

These new fibers, such as rayon, have been discussed elsewhere in this book.

YARNS.—We saw in the previous pages that the fabrics are made into yarn or thread by a process of carding and spinning, as in cotton, wool, spun-silk rayon, or doubling and spinning in the case of long-fiber silk and rayon. The question of the making of the proper yarn is very important to the maker. The yarn may be made of pure stock of cotton, wool, silk, linen, rayon, or a blended stock consisting of: (a) cotton and silk, (b) cotton-silk and rayon, (c) wool, cotton, and rayon, (d) cotton, wool, spun rayon, and long-filament rayon. The resulting blend may be cheaper, and may represent a composite value of the properties of all the fibers used.

Today we have unlimited fabrics in both staples and novel-

ties due to the weave effects found in: (1) combination of yarns; (2) blends of different raw stock (fibers), as well as different kinds of rayons.

MODERN INFLUENCE ON DRESS.—During the last generation many social and political changes have taken place in the United States that have had a strong influence on women's clothing. The most important are:

- (a) Women going into business.
- (b) Women's activities in sports.
- (c) Universal suffrage for women.
- (d) Development of motor cars and airplanes.
- (e) Women's activities during the war.
- (f) Applications of the new principles of hygiene to dress—exposure of body to sun and air as far as possible.
- (g) Aesthetic development—the feeling that every person should be made as beautiful and attractive as possible.

Then came the introduction of the thin fabrics, gauzes, chiffons, voiles, and georgettes. Up to 1900, women wore heavy underwear, due to the ineffective system of heating; heavy silk, all wool, long-sleeve, and ankle lengths were worn during the cold weather. Under-flannels disappeared when the fur coat and thin costume appeared. Transparent gowns showed heavy underwear. Linen, silk, and cotton underwear were more attractive.

Rugs

Development of Rugs and Carpets.—Originally, and for some time, all floor coverings were carpets, but during more recent years the rug gained in use and favor. A rug is a floor covering ranging in size from a foot square to the dimensions of an ordinary room. While a carpet and rug may differ in size, the essential difference is that the carpet is made in strips 27 inches wide, is sold by the yard, and is sewed to fit the entire floor of the room, while a rug is sold as a whole

and consists of a body and a border. A rug is more sanitary than a carpet, and for hygienic as well as artistic reasons is more popular.

The description of the manufacture of carpets and rugs of the same composition and structure is quite similar, hence only one description is provided.

HISTORY OF RUGS.—Carpets and rugs developed from early times in response to the needs of the people, particularly those Orientals who were nomadic in type and who traveled from place to place with their flocks of sheep. These tent-dwellers were obliged to invent fabrics for seats, couch coverings, and hangings in the tent. Hence the invention of wool rugs, which were used first to sit on, then to kneel on for religious purposes, and finally for decoration of the walls.

In Egypt rugs were first applied to religious purposes by the priests, and were also used to ornament the palaces of the Pharaohs. The Babylonians, who were very skillful in weaving cloths of divers colors and designs, developed rug making to such a degree of perfection that examples of their art were sought and prized in both Greece and Rome. This skill was passed on to their successors, the Persians. In Europe during the 14th to 16th centuries, the Persian type of rug was used for wall hangings, in the chambers of royalty, and before the high altars of the cathedrals. They were also used as coverings for furniture.

The actual manufacture of carpets, in their more recent application, is assigned by historians to the reign of Henry IV of France, between 1589 and 1610, and is said to have been introduced there direct from Persia. This was extended in 1664, when Colbert, the French minister, founded a manufactory at Beauvais. He was the minister who, in 1677, induced King Louis XIV to purchase the famous Gobelin tapestry works and establish them as a government institution, under royal patronage. England witnessed her first successes in carpet manufacture through French weavers. In 1685 a skilled artisan left France in disgust, on account of political and religious persecution, and established the industry at Surrey. Many other French refugees followed him, and in a short time England began to produce carpets superior both in quality and design to those of the French.

HISTORY OF CARPETS IN AMERICA.—Prior to the American Revolution, woven floor coverings, with the exception of domestic rag carpets, were practically unknown in this country. A few "Scots" (ingrain) carpets from Europe had found their way into some private city houses, but such a rarity were these that country people, on

being ushered into apartments where they were laid, instinctively tiptoed around them, in awe lest they should soil them. In 1761, an American firm advertised Turkish carpets, and in 1763 both English and "Scots" carpets, but these were to be seen in the homes of none but the very wealthy. In 1776, the floor covering in most general use throughout the Colonies was the rag carpet above mentioned, made with a stout flax or cotton warp supplied by farmhouse spinning wheels. Then ensued the long war of the Revolution and the consequent commercial depression. The majority of the people, who possessed but little wealth before the war, were now in no condition of temper or purse to encourage the importation of English goods. About the close of the year 1791, the first carpet factory in the United States was built by W. P. Sprague, at Philadelphia. The first carpet made by the Sprague factory was a handmade, finger-tufted fabric, designed for the United States Senate chamber. Attracting the attention of Alexander Hamilton, it induced him, in his report on finance for that year, to allude to the new home industry, and to recommend, as an encouraging measure, the imposition of a small tariff on foreign carpets. In 1825 a mill was in full operation at Medway, Mass.

BIGELOW'S IMPORTED MACHINERY.—Until the year 1840, the weaving of carpets and rugs of all descriptions was performed by hand. The attempt had been made repeatedly in England to adapt the power-loom to the weaving of ingrain carpets, but without success. About this time Erastus Bigelow, a young American inventor, turned his attention to carpet machinery, and was trying, with small success, to interest carpet manufacturers. The object sought for was a loom that could make rapidly a carpet of smooth, even surface, a good selvage, and figures.

Later, a modern machine loom of great width was developed. It allowed rugs to be woven that were attractive and of various sizes to meet the needs of home furnishings of all types of rooms and halls.

Types of Machine-Made Rugs.—There are six main types of rugs made and sold extensively in the United States: chenille, luster, Wilton, Axminster, velvet, and broadloom.

CHENILLE.—Chenille is the most expensive and most luxurious weave and offers the widest range of possibilities as to depth of pile, design, and colorings. It also stands apart in the fact that it may be woven in width up to 30 feet without a seam, and can be made to fit into alcoves, around fireplaces, etc.

No carpet fabric offers quite the sense of perfect luxury as

a deep-pile chenille. Chenille is made with pile up to 1½ inches deep. A chenille has a soft, quiet, resilient quality that makes each step upon it a satisfaction. This is caused by the heavy cushion wool back and the thickness of the pile.

There are almost no design or color limitations in chenille manufacture. They have often woven into the patterns of such rugs copies of Aubusson, Savonnerie designs, fraternity insignia, trade-marks, coats of arms, etc. Special shapes of any color scheme are possible.

Chenille is made from lustrous wool or worsted yarns of finest selected quality. Chenille fabrics are adapted for lobbies and public rooms where they will be subjected to a great degree of wear.

The *luster-type rug* is a comparatively new development in the domestic floor-covering industry. The best worsted or wool yarn is used and the designs, of course, are Oriental in character—most of them developed from rare old museum rugs. The fabric when finished has a luster similar to the genuine Oriental, which indicates the permanence of the colors. An excellent example of luster-type rugs is a Wilton weave produced on a Jacquard loom—of the finest quality worsted yarn and with the pattern woven through the back. A recent development in effecting an Oriental sheen in the less expensive Axminster weaves, is to “highlight” irregular sections of the background by weaving a slightly lighter shade of yarn than that used in the rest of the ground.

These rugs may be woven either as Wilton, Axminster, or velvet, and are converted into luster-type merely by washing or brushing in a chemical solution. This chemical bath imparts a shiny luster or sheen to the surface yarn, which is similar to that in Oriental rugs. The rugs may be woven of either woolen or worsted yarn. The chemical solution used in the bath is in itself a strong test of the colors. The colors in this type of rug must, therefore, be fast to washing and light. The trade designation “American-Oriental” has been outlawed in favor of “luster-type” because the former term was also being applied to rugs that were merely highlighted in

ground colors, but not washed in an acid bath. Highlighting of ground colors in luster-type rugs, however, is often done to further enhance the sheen of the rug in washing.

WILTON.—Wilton rugs and carpets are made exclusively upon the Jacquard loom. Rugs not made upon this loom may not be called Wilton, according to the ruling of the Federal Trade Commission. It is quite common in the retail trade to speak of velvet rugs as Wilton-Velvet. Strictly speaking, there is no such thing.

Wilton is made both in wool and worsted qualities. The weave is very tight, and only the hardest and most resilient yarns are used in its construction. The worsted Wilton is by far the best wearing fabric made, and the better grades of wool Wilton also have great durability. (Fig. 170a.)

In color possibilities Wilton is more restricted than any other fabric. The Jacquard loom will accommodate only five or six different yarns, and therefore only five or six colors are used, though certain colors may be introduced through "planting."

Brussels (Wilton with an uncut pile) were formerly widely sold, but have now practically disappeared from the market.

A loop-pile fabric superior to Brussels is on the market and the loops cannot "sprout," or pull out. It is also lower in cost, yet commensurate in softness and wearing quality.

A portion of woolen or worsted yarns is buried in the back of a Wilton rug, giving it resiliency (cushion back) and durability (buried value). Velvet, which appears somewhat the same on the surface, has no yarn buried in the back, showing only the jute stuffer warp, the cotton chain warp and jute weft filling yarn. All the woolen yarn in velvet weave appears on the surface.

The number of wires (rows) to the inch showing on the back of Wilton fabric is one evidence of its quality. The character of the yarn, the pitch, and the height of the pile are also factors determining the grade of Wilton fabrics.

AXMINSTER.—Axminster rugs and carpets are just below Wilton in price range, yet they will give good service in rooms where price is a consideration.

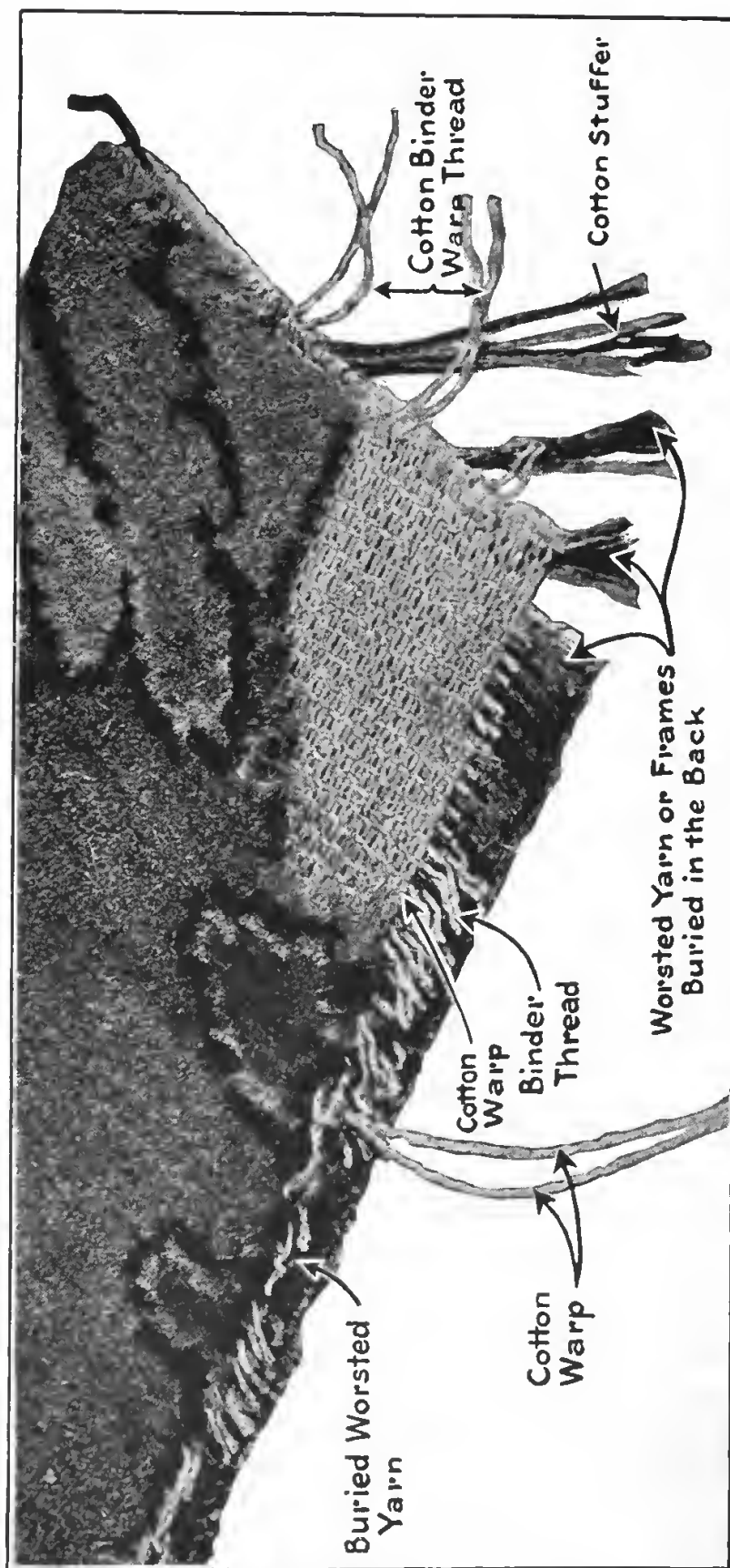


Fig. 170a. General View of Wilton Rug Construction

Courtesy of Mohawk Carpet Company

They have been placed satisfactorily in dining rooms, corridors, public spaces, mezzanine floors, bedrooms, etc. But for exceptionally hard service we would always recommend a good grade of Wilton.

Axminsters are made only from wool yarn, the weave not being tight enough to permit use of hard-surfaced worsted yarn. The pile is usually deeper than that of Wilton goods.

As in the case of Wilton, one can tell a good Axminster by the number of rows to the inch on the back of the goods. Seven or more rows to the inch will be found in better qualities. Fig. 170b.)

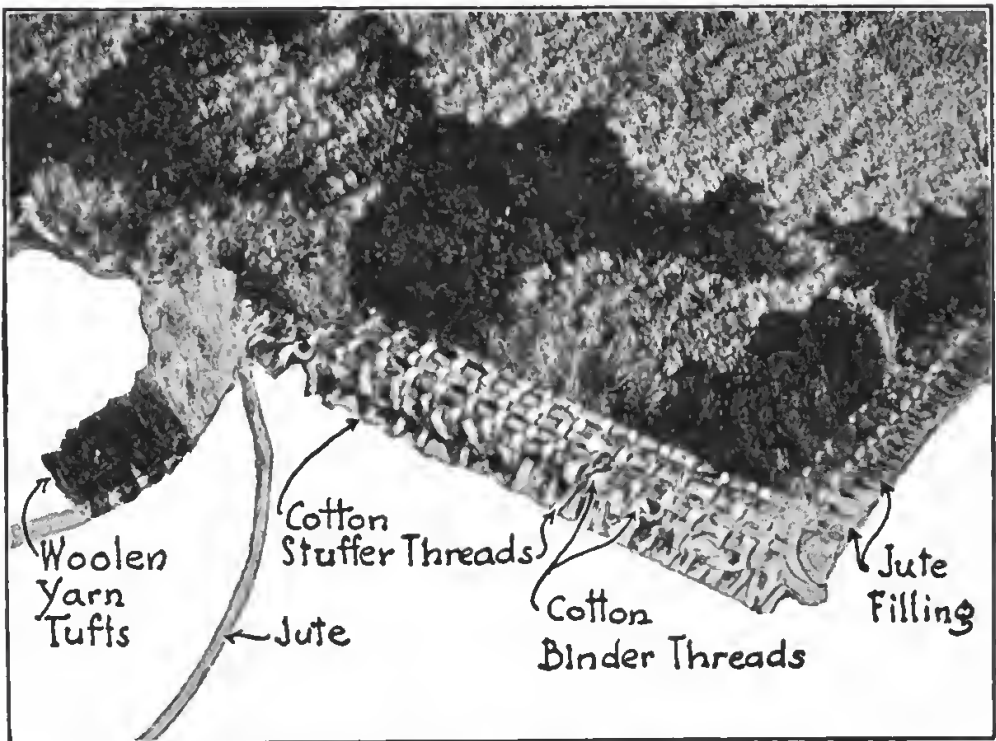
The Axminster weave has one distinct advantage over the Wilton. There are theoretically no restrictions upon the number of colors which can be used. This allows for greater flexibility for the development of design.

VELVET.—Velvet, in general, costs less than Axminster. It is made in a number of different qualities for various uses. The better qualities have an extensive use in hotels, clubs, etc., where a carpet having a good appearance can be obtained at a low price.

On the surface it has somewhat the appearance of Wilton. To repeat, a common term in the trade is that of Wilton-Velvet. There is no such weave, and the Federal Trade Commission restricts the name of Wilton weave to one produced on a Jacquard loom. Velvet is woven on a common type loom without the Jacquard device. Velvet designs are either printed on the yarns before weaving or after carpet is woven.

Velvet in the better qualities resembles Wilton in appearance, but has more possibilities in color. It does not have the structural quality of the Wilton, as there is no buried wool in the jute back and it is not made on a Jacquard loom. Only one yarn is used, but this has to be of good quality and of the same grade throughout, in order to take the various color dyes properly.

BROADLOOM RUGS.—Rugs are woven as broad rugs or narrow rugs. Those woven in widths 54 inches or wider are called "broad," while those woven 27 inches or 36 inches are called



General view of Axminster construction at actual size



An Axminster knot. The Axminster loom virtually does the work of Oriental fingers—thousands of them at once. When the chain is drawn tight the tuft becomes, to all intents and purposes, a knot.

FIG. 170b. Axminster Rug Construction

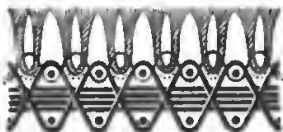


FIG. 170c. Other Types of Weave

Courtesy of Mohawk Carpet Company

“narrow.” Broadloom rugs or carpets are produced as wide as 18 feet.

Glossary for Machine-Made Rugs.—We give now an explanation of terms used in the carpet and rug trade.

AXMINSTER.—A coarse, thick weave. The yarn is threaded through hollow tubes or fingers which insert it between the warps, where it is caught and bound by the warp-and-weft motion. The yarn is then cut off to form the pile tufts.

BROCADE.—A figured effect produced by using two different kinds of yarn of similar color; soft, straight yarn for the ground and hard-twisted, crinkled yarn for the figure—producing an embossed effect.

BROADLOOM.—Carpets woven in widths 54 inches or wider, as distinguished from “narrow loom” widths of 27 inches and 36 inches. Broadloom carpet is produced as wide as 18 ft.

BRUSSELS.—A weave the same as Wilton, except loops instead of tufts form the surface.

BURLING.—An inspection treatment after weaving, to straighten up sunken tufts, to clip off long tufts, and otherwise add to the finished appearance of the fabric.

CHAIN.—(See “Warp” and “Weft”)

CHENILLE.—French word meaning “caterpillar.” A furry ribbon is used as weft in producing Chenille fabrics, the fur protruding between the warp threads forming the surface nap.

COLOR LIMITATION.—An unlimited number of colors can be used in the Chenille, Axminster, Tapestry and Velvet constructions. Five main colors, plus a very few planted colors, can be used in the Wilton and Brussels weaves. (See “Planted”)

DOMESTIC ORIENTAL.—A special weave characterized by flexible body construction and waterproof dyes, permitting of washing with special compounds to produce an appearance similar to washed hand-made Oriental rugs. Special lustrous yarn is required to start with and the luster or “sheen” is heightened by the washing process. Also known in the trade as “sheen-type” rugs.

FRAMES.—Trays holding spools from which yarn is fed into Wilton looms. They are arranged in banks, one on top of the other, usually not more than five banks. The spools in each frame are wound with yarn of the same color; thus if there are five full colors in the pattern, there must be five frames. The word is used also to denote quality, such as “3-frame,” “4-frame,” etc.; 5-frame Wilton is the

highest quality, meaning that there are five full layers of woolen yarn, besides the cotton warp and linen filling in the fabric. (See "Planted")

GROUND COLOR.—The prevailing color against which other colors create the motif or design. (See "Top colors")

HEATHER.—Small quantities of wool are dyed bright red and are mixed in the carding machines with brown, black, and grey portions of fleeces. The carded fibers are spun producing, without further dyeing, a yarn of dark grey effect, slightly brightened by the red fibers.

JACQUARD.—A pattern-making mechanism consisting of a card-board roll in which are punched holes indicating the colors of the tufts that are to appear in the rug. It operates on the same principle as the music roll in a player piano. As the holes pass over a mechanism in the loom, the required color is pulled up to the surface at the point of weaving. The perforated roll is prepared by a machine which translates the color effects in the design to holes in the paper so that the designer's ideas as to figures and colors in the fabric are produced automatically as the Jacquard pattern is fed through the loom while the weaving mechanism is in operation. (See "Wilton")

JUTE.—Fibrous skin growing between the bark and stalk of a large plant grown in India. It is shredded and spun into a very strong and durable yarn, sometimes used for backing, to add strength and stiffness to floor-covering fabrics.

LINEN.—Used for weft in fine weaves.

NATURAL.—Yarn spun from a mixture of black, brown, and grey portions of fleeces, blended in carding machines. The result is grey yarn containing no dyestuffs.

NOILS.—(See "Wool—combed")

PICK.—The weft thread shuttled through the fabric crosswise of the loom between the warp threads. The weft serves to tie in the yarn that forms the surface tufts or loops. The number of picks per inch is indicative of the closeness of the weave; for example, a high-class Wilton has about $13\frac{1}{2}$ picks per inch. In the Axminster weaves, the word "row" means the same as "pick" in other weaves. (See "Wires")

PILE.—The upstanding fibers or tufts of worsted or woolen yarn that form the wearing surface of rugs or carpets.

PITCH.—Indicative of closeness of weave, considered in connection with "pick" or "rows." Pitch means the number of warp threads per

inch measured crosswise of the loom. The warp threads run lengthwise of the fabric and interlock to bind in the weft, thus fastening the surface yarn. The closer together the warp threads, the finer the weave; for example, good Wilton rugs are 256 pitch, meaning that there are 256 warp threads to each 27 inches of width of carpet, or 1,024 in a 9x12 rug.

PLANTED.—When it is desired to show more colors on the surface of a Wilton fabric than there are frames, it is necessary to use part of the space in one or more frames for the spools containing the extra colors. These colors will feed into the loom only in a direct line forward, therefore the figures showing such extra colors must be in line with each other throughout the fabric. Extra colors thus introduced are called “planted” colors.

QUARTER.—Unit of loom width, 9 inches, or $\frac{1}{4}$ of a yard. The standard carpet width is $\frac{3}{4}$, or 3 times 9 equals 27 inches. Yard wide carpet is known as $\frac{4}{4}$; 9 ft. wide as $\frac{12}{4}$; 15 ft. wide as $\frac{20}{4}$, etc.

REPEAT.—The distance from the beginning to the end of the largest figure in the pattern, measuring lengthwise of the fabric. In matching carpet this must be taken into account, as the figures in the various strips must be joined so as to match, and this involves some waste in cutting. The larger the figure or “repeat,” the more waste, etc. A large repeat also means greater yardage in a minimum weaving; a small repeat can be produced in small quantities.

REVERSE COLORING.—Several different color effects can be produced by using the same Jacquard cards, by changing the yarn in the frames; for example, using the ground color for the figures and vice versa.

SEAMED.—Rugs or carpets made by sewing strips together.

SEAMLESS.—Rugs or carpets woven without seams.

SHADING.—Crushing or bending of pile fibers so that light reflected from the side of the fiber gives the illusion of a light spot on the rug; the same spot viewed from the opposite side of the rug will appear darker than the rest. Not a defect but a characteristic of all pile fabrics.

SHEAR.—A machine containing brushes and rapidly revolving knives like a lawnmower, through which fabric is drawn, the brushes and knives removing loose ends and trimming surface tufts to a uniform height, the refuse being drawn off by suction.

SHEEN-TYPE.—(See “Domestic Oriental”)

SHOT.—The number of weft threads (see “pick”) considered in reference to the tufts or loops of surface yarn: 2-shot means that there is one weft thread between each row of pile tufts; 3-shot means three weft threads to each row of tufts, one on the back and one on each side. The 3-shot, requiring more material and more loom motion, adds to the cost, but increases durability.

SKEIN-DYED.—Yarn spun from white wool or worsted, and dyed by being immersed in dye vats in the form of skeins.

STAPLE.—The general fibers of wool or cotton, considered as an index of quality; for example, a single fiber judged by itself as to length, thickness and resiliency denotes the quality of the batch,—that is, if the fiber measured may be considered as representing the average of all of the fibers in the batch.

STOCK-DYED.—Raw wool dyed before being carded or spun.

STUFFER.—Coarse yarn (usually jute), running lengthwise of the fabric that is caught by the weft and warp and bound into the fabric to form a thick, stiff, protective backing.

TAPESTRY.—A loop surface fabric resembling Brussels but woven without the Jacquard mechanism, using only one layer of worsted yarn, on which all of the colors have been dyed, according to design, before being placed in loom.

TOP COLORS.—Colors forming the design, as distinguished from the ground color.

VELVET.—A fabric resembling Wilton, but woven without Jacquard mechanism, using woolen yarn, on which all of the colors have been dyed, as per the design, before being placed in loom. This differs from tapestry only in using woolen yarn and having a tuft surface instead of a loop surface.

WARP.—Cotton threads running lengthwise of the fabric, always in two series. In the loom, each series is connected to a heddle. The heddles work up and down, causing the warps to cross at the moment that the shuttle is thrown across the loom carrying the weft. (See “Pick” and “Pitch”)

WEFT.—(See “Pick” and “Warp”)

WILTON.—(Sometimes called “Royal Wilton.”) Fabric woven on a Jacquard loom with either a worsted yarn or woolen yarn surface. Usually the fabric is called “Wool Wilton” when woolen yarn is used. (See “Jacquard”)

WIRES.—The wires are strips of metal that are inserted between the warps at the same time that the weft is inserted, crosswise of the

loom. When the heddle motion binds in the woolen surface yarn, it comes down over the wire which holds it away from the body of the weft-and-warp foundation. As the weaving progresses, row by row, the mechanism withdraws the wires from the fabric and carries them ahead, placing them between the advancing warps to form new rows. If the wires are plain, the withdrawal leaves a loop of yarn standing and all looped surfaces are known as "round wire" fabrics or "Brussels" or "Tapestry." (See "Brussels" or "Tapestry") On some wires, tiny knives are attached to the end so that when they are withdrawn, the surface yarn surrounding the wire is cut, leaving tufts standing instead of loops. The tuft surface fabrics are known as "cut pile" or "Wilton" or "Velvet." (See "Wilton" and "Velvet") The term "wires" also is used as an index of quality synonymous with "pick." "Thirteen wires to the inch" means the same as "13 picks to the inch." (See "Pick")

WOOL—CARDED.—Scoured wool that has passed many times through a carding machine which picks out burrs and other foreign matter and separates the wool fibers.

WOOL—CARPET.—Produced in China, India, Argentine, and Scotland; must be long staple, thick, tough, straight, and of great resiliency. American wool is too soft, thin, and curly to be used for floor-covering fabrics.

WOOL—COMBED.—Carded wool that has been passed through a mechanical comb that separates the long, thin, straight fibers from the short, curly fibers. The long, straight fibers are called "Worsted tops" and the short, curly fibers are called "noils."

WOOL—IN GREASE.—Raw wool as sheared from the sheep, containing the natural animal grease, dirt, burrs, etc.

WOOL—SCOURED.—Raw wool after being washed thoroughly in caustic soda, soap, and rinsed in clean water.

WOOLEN YARN.—Yarn spun on a spinning Jack from carded wool. A soft, bulky, rough type.

WORSTED YARN.—The long, straight fibers combed out of wool, twisted together on high-speed spinning frames. A slender, hard, lustrous type.

Oriental Rugs.—In addition to the above machine-made rugs there are hand-made Oriental rugs. Among lovers of true art, the Oriental rug is prized far above the machine-made product. The reasons for this will be readily appreciated when pointed out. In the first place, the exquisite taste and

skill of the Oriental weaver are shown not only in the beauty and novelty of the pattern of his product, but also in the richer and more harmonious colorings. In addition, these rugs are the most durable textiles to be found in the world. They are built up knot by knot, so slowly, skillfully, and laboriously, that when complete, the life of the fabric is not merely for a few short seasons, but for generations. In the preparation of both the wool and dyes the utmost care is taken. In some districts the sheep are even kept wrapped in blankets and housed in order that the wool may be of the finest texture.



FIG. 170d. Hand-Weaving Processes

The colors chiefly used in dyeing are what have been called the perfect seven: indigo, porcelain blue, green, yellow, orange, crimson, and rose red. The dye is important, for these colors are generally of vegetable origin, and for ages the jealous care of the secret has been handed down from one generation to another. Unlike aniline dyes, which maintain their full brilliance for only a limited time, the vegetable dyes produce pure, perfect colors which not only endure for centuries, but actually improve with age and wear and take on a more beautiful luster.

An Oriental rug is said to be fine or coarse according to the "pitch" or number of "points" (tufts) per square inch that it contains. A Persian rug, for instance, has double the number of tufts in the same space that an Anatolian has. Thus, the same design in one would be small and close, while in the other it would be large and coarse, and the values would differ

accordingly. The number of tufts per square inch beyond a certain limit, however, does not add to the quality or durability of the rug. From 30 to 40 are all that are necessary for ordinary use, and 80 knots represent a fineness that should not be exceeded, as it would but increase the cost without adding anything to the beauty or durability of the rug.

Many attempts have been made to imitate Oriental rugs, but without success. No machine has ever been invented which can give the twist to the yarn and tie the square knots which are the peculiar features of the hand-made fabrics. The native Persian or Turk can do it almost from the day he is able to stand at the loom, but his knack is largely inherited. Even in the most ordinary qualities, the knots are so minute as to be almost invisible to the naked eye. The weavers of the Orient at the present day weave as their fathers and their fathers' fathers did before them.

PERSIAN RUGS.—The rugs generally regarded as the most perfect products of the Oriental loom are made in the various districts of Persia. Prominent among these is the Kurdistan rug, which is noted particularly for its fine texture and rare weaves. Many of them are ornamented with floral patterns, others in the mosaic style, and, while no two patterns are found alike, they are in most cases very rich and intricate.

The province of Kurdistan is fortunate in possessing a peculiarly choice grade of wool, that is at first hard, but which softens wonderfully with age.

Economy in Purchase of Rugs and Carpets.—Better grades of less expensive fabrics are advisable. Economy in the buying of rugs and carpets does not mean necessarily purchase of the lowest-priced fabrics. It implies, instead, purchase of the right fabric for each particular use. Placement of a velvet rug in a hotel lobby would be poor economy, first, because it would not speak "quality," and second, because it would not give satisfactory wear under such rigorous conditions.

The person selecting woven floor coverings should first determine what different fabrics are suited for each particular

use. He should then buy the one best suited to the need in every respect, and which comes within the budget limitations of the client.

As an almost universal rule, it is more economical to purchase the better grades of less expensive weaves, rather than the poorer grades of those which are more expensive.

The Selling Points of a Rug.—It is helpful when purchasing to know the differences between the various types of rugs. Some points regarding serviceability and appearance are listed here:

1. A rug is easier to clean than a carpet.
2. It should have sufficient weight in the fabric to lie flat on the floor.
3. The color and design should not be gaudy or large.
4. A rug should harmonize with the rest of the room.
5. A hall-room rug should be brighter than other room rugs.
6. A smooth surface or uncut pile is easier to take care of than a cut pile.
7. A short, close-pile rug gives longest wear—preferably worsted yarn with linen backing.
8. Cut pile shows to better advantage because the long, soft pile effect gives a velvet-like surface.
9. Cotton rugs wear shabby quickly due to short fibers, and they soil easily on account of the porous nature of the fibers.
10. The Wilton rug is serviceable, but hard to keep clean because the cut pile absorbs the dust.
11. The closer the weave, the better the rug.
12. A velvet rug has a printed warp. It has a closer construction than Axminster, but not so close as a Wilton.
13. Wilton rugs are medium-grade rugs of different values depending on composition, nap, and coloring.
14. The Axminster rug has a long nap (soft) in bunches, and is not durable because the nap wears off.
15. Chenille is one of the most expensive rugs, due to the soft, fluffy yarn used.
16. A Brussels rug has an uncut pile and does not catch the dirt so easily. As the composition is cotton and jute, it does not look as rich as a velvet or Wilton.
17. An ingrain rug is very serviceable because it has no pile, and, of course, has not the velvety beauty of a pile rug.
18. The Persian rug is the best for softness and richness of color,

due to high-grade composition, careful weaving, good designs, and coloring.

19. An Oriental rug is valued according to age, number of stitches to the inch, composition, richness of coloring, fineness of design.

20. An Oriental rug may be told from a domestic rug by comparing the backs. In the Oriental, the whole pattern is shown in detail on the back.

Important Information Concerning the Care of Rugs and Carpets.—The life of a rug or carpet depends upon two things—the quality you buy and the care you give it. You can add years of service to your floor coverings by following these suggestions. Dirt, grit, etc., unless removed, will work down into the back and with continual grinding will soon cut the threads and will wear out a carpet. Whether by vacuum or broom the carpet should be kept clean. Electric cleaners and carpet sweepers are especially recommended for pile-surface rugs and carpets. If a corn broom is used, the sweeping should be done lightly. By rubbing your hand over the surface of the floor covering, you will discover that the pile tends to slant slightly toward one end of the rug. Sweep in this direction—not against the pile.

Most woven floor coverings have a pile surface. The pile is the plush-like mass of perpendicular yarns which forms the surface of a rug or carpet.

In finishing the fabric this surface goes through a shearing process to make it level and smooth. This process leaves a quantity of loose particles of wool in the rug and is the cause of the fuzz or fluff which always comes out during the first few sweepings. Do not be alarmed at this shedding. It is only a temporary condition. Sweep the floor covering gently for the first two or three weeks until the wool has regained its natural amount of moisture which has been dried out while the fabric was in storage.

PILE CRUSHING.—When constantly repeated pressure is applied to the surface of a rug or carpet, it tends to make the pile or surface yarn flatten down or slant in one direction. If this pressure is evenly applied over the entire surface of the

rug, no shading is noticed because all of the surface yarn lies at the same angle and therefore reflects the light evenly. If however, certain areas of the floor covering are walked upon much more than others, the uneven crushing will cause these areas to appear lighter in color from one end of the room and darker from the other end. Pile crushing is not a fault. All pile-surface rugs and carpets, including chenilles, Wiltons, Axminsters, velvets, and broadlooms, are subject to this feature and no manufacturer has yet been able to eliminate it. It is, therefore, not a reasonable basis for complaints. Pile crushing may be reduced to a large extent by occasionally turning the rug or carpet around to distribute the wear more evenly.

GREASE AND OTHER SPOTS.—One of the standard cleaning solvents for grease, used in great quantities by textile manufacturers and all cleaners, is "carbon tetrachloride." This is the basis of most cleaning preparations. Saturate the spot to be cleaned and squeeze the dirt or grease away with clean cheesecloth.

Sulphuric acid from a battery will destroy vegetable fiber, cotton, and jute used in carpets as soon as it touches them.

BURNS AND HOLES.—Burns from cigarettes are the most common form of burns. Wool will smoulder and char so that a hole will soon occur from a very slight burn. This can be repaired by a rug repairer by burling or tying new tufts to take the place of those missing.

Moths damage rugs to a considerable extent at times. The worm of the moth eats only the wool and very often only one color, as it seems to have preference both in taste and smell. The spot will usually be irregular.

If the spot is regular in form, the insect is not a moth but very likely a tow bug which is harbored in inexpensive, over-stuffed furniture.

A wood worm causes damage in damp seasons in the South. This insect eats the jute yarns and especially the back of rugs having jute construction. The preventive for these, as recommended by the government, is naphthalene.

Missing tufts of wool from a rug or carpet can easily be

restored with a darning needle and the proper yarn and color. The colored yarn can be supplied by any rug manufacturer. Sometimes little ends of pile or warp will appear above the surface of a new rug or carpet. Clip them off level with the surface. Never pull them out.

Problem of Shading.—The fundamental rule is that the floor covering must be the darkest and heaviest tone used in the three levels of interior decoration, viz., ceiling and side-walls (above natural eye level), the furniture and accessories (below eye level), and the floor (the foundation).

Again it is understood that the size of the room often governs the size of the pattern repeat, and the width and character of the border pattern will affect the apparent size of the area. A dark border pattern, comparatively wide, is well adapted to a large room, but it would make a small room seem much smaller.

Appreciating these facts we come to another problem in the matter of "shading" in woven floor coverings. In using plain colors in carpet, "shading" and its kindred complaints of "spilled water" and "leopard spots" must be understood as inherent. The more aggravated they appear to be, the finer and more expensive may be the fabric.

Traffic wear will often bend the pile yarn over so that light will reflect from the epidermis or highly polished sides of the wool fibers. This portion will appear to be a lighter shade of color than the fiber in the normal upright position. There is an impression created at once that the color is fading and complaints are made of "pile crushing."

Worsted yarn may give this reaction more quickly and frequently than woolen, because it is of a heavier and more glossy nature. Again, a deep pile fabric and consequently a more expensive one will shade readily, because there is sufficient pile to bend over.

It is well to bear this problem in mind in conditions of heavy traffic or where strong lighting will make the natural shading show up to disadvantage. Two-tone or three-tone all-over patterns are often advisable. Design motifs that tend to

cover the area pretty well, leaving no large plain spaces, can also be recommended.

Tapestry

Tapestry Design.—Observe a tapestry. Examine it very carefully with a pick glass and notice that it is a fabric containing very pretty designs. This fabric is made by interlacing on a warp colored threads of wool, cotton, or silk so as to produce a pattern. A true hand-woven tapestry is not exactly weaving or embroidery. The threads are not thrown with a shuttle as in weaving, but worked with short threads of various colors, which are put in with a needle. As many as 14,000 shades are available for working designs in a tapestry. Hence the soft gradation of tones in the woven tapestry becomes one of its primary features and proclaims the quality of the work. In olden times it took weeks to interlace a few inches of a design, but today with modern methods it is possible to obtain tapestry which has scarcely felt the touch of the human hand and which may have all the beauty of the antique, at a price within the reach of the average homemaker.

A hand-woven tapestry shows on the back all of the outlines and differences of color of the pattern that appear on its face. The machine-woven tapestry, while showing all of the colors on the back, has no indication of the character of the pattern. Another almost certain characteristic that can be distinguished at a glance is the variation in the weave. Hand-woven tapestry is invariably perfectly true and straight, particularly at the edges.

History of Tapestry.—There is evidence of tapestry weaving all over the world. Signs of it are found in Egypt, North and South America, China, Greece, Borneo, Northern Europe, and Rome. The earliest evidence of tapestry weaving was found in Egypt. On a wall in the hypogeum at Beni-Hassan, dating about 3,000 B. C., is a picture of a loom with two women in the act of weaving upon it. The loom is very simple, but has all the essentials of the present-day "high-loom" used in

tapestry weaving. In Babylon signs have been found which indicate that tapestry weaving was a common industry. In fact, it is commonly believed that a Persian king learned the art in Babylon and then taught it to his own people. From Persia the art spread to ancient Greece.

It is not known whether the Romans carried the art to Northern Europe, or whether the Moors introduced it at their invasion. Nevertheless, at an early date tapestry weaving was carried on to a small degree in France and Germany. Later evidence indicates that it was carried on in monasteries in these countries. In 1025 there was a tapestry factory in Poitiers, France. In the 12th century, factories also appeared in Arras, France, and in Brussels and Lille. In 1476 Giles Gobelin started a dye plant in France and later began to weave tapestries. This plant was later taken over by the French government. From France the industry spread to Holland, Belgium, and England, but the Gobelin tapestries of France have never been surpassed.

Gobelin Tapestry.—There are about 400 Gobelin tapestries of which 300 are of less distinguished quality, being of Flemish manufacture and made only for decorative purposes. The other hundred are of 16th century Gobelin and Burgundian manufacture. Many of these were made especially for the Hapsburg family and such tapestries bear clearly the royal coat-of-arms.

The distinction of the Gobelin tapestries lies in the unique quality of the dyes used. Gobelin is the name of a family of dyers, originally from Rheims, who, beginning with Jehan Gobelin in the 15th century, became established in Paris in the Faubourg Saint Marcel. Jehan Gobelin discovered a scarlet dyestuff which for richness and luster has never been equalled, and this dyestuff he and his descendants used lavishly in tapestries of their own manufacture.

These tapestries were used by the nobility and royalty of Europe as floor and furniture coverings, as well as for wall hangings and curtains, and in most of them some ancient or current heroic or religious episode was illustrated.

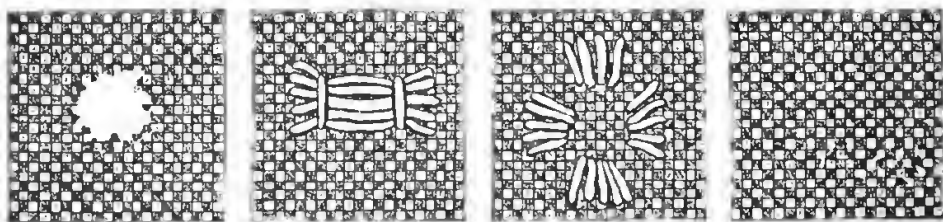
Reweaving

Defects in woven fabrics, due to imperfect weaving and damages to the cloth, may be corrected as follows:

Perching.—The worsted and sometimes woven fabric as it comes from the loom receives a perching and measuring inspection in the weave room before leaving for the finishing room. This examination is to detect quickly such imperfections as require prompt attention at the loom.

Burling.—Every knot that has been tied in the threads during winding, dressing, beaming, and weaving must be looked for and felt for during burling, must be carefully drawn to the surface of the cloth, and then should be clipped off with the scissors, leaving the ends long enough so that no space with thread will occur. Threads which are found loose on the face or back of cloth, caused by the fact that the weaver has tied in a broken end, should be cut off and not pulled off. All places where threads are not woven in are marked so that the sewing-in girl (mender) can adjust such defects. The cloth is then subjected to perching again. It is examined for imperfections, and these are marked with chalk to call the attention of the menders to such places.

Mending.—The object of darning or mending is to make all repairs in the structure of the cloth before the process of fulling—also to replace holes and damage spots. (Fig. 171.)



(a) Damage

(b) 1st Weave

(c) 2nd Weave

(d) Finished

FIG. 171. Showing the Process of Weaving Damages

The mender must have a good eye: (1) for colors necessary to produce various effects, and (2) for the interlacing of the threads. More exact work is required for threadbare fabrics

that require little if any finishing, than in dealing with a face finish fabric, where the nap is to be raised and will cover many imperfections so that they will never be noticed in the finished cloth.

This mending is really a form of weaving and is used extensively on a commercial basis by dry-cleaning establishments in repairing damaged fabrics. If sewing stitches are used in repair work the seam will remain, but if textile weaving is used the work may be done without a seam.

Lace

Lace and Lace Making.—While weaving is the oldest method of producing cloth, lace making followed shortly afterward. The idea of lace making came from twisting and stitching the frayed edges of torn garments. In early times fabrics were scarce, and they were frequently handed down from generation to generation. Only the nobility could afford sumptuous costumes. Since these costumes would naturally become threadbare and frayed, they would require skillful needlework in order to retain their decorative value. It was in the course of making these frayed fabrics attractive that lace formation was discovered. Lace soon became a method of producing decorative fabrics, and its history is a romantic story dating from the days of the early Egyptians. The subject has been discussed in Chapter 4.

Applied Structural Decoration

The above methods of decorating textiles by structural designs can be, and are, used today in many cases. In addition there are various stitches that can be made part of the structural design. Various illustrations are given below.

Drawn Work.—Look at a piece of drawn work and note that it is a kind of ornamental work done in textile fabrics by (1) pulling out or drawing to one side some of the threads of the fabric, while leaving others, or (2) by drawing all into a new form, producing various fanciful patterns. (Fig 172.)

One may say that this drawn thread work is the simplest kind of lace. The early name for it was cut-work. And today, modern drawn work is generally left in patterns of more or less complexity without the addition of needlework.

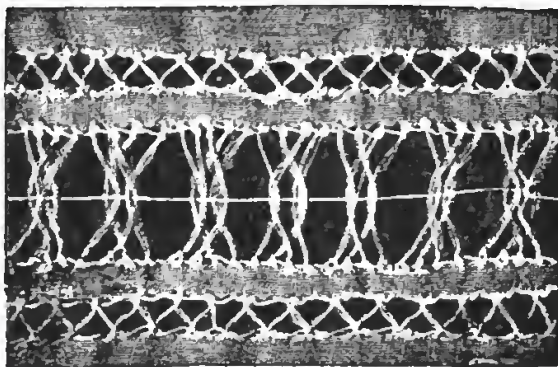


FIG. 172. Drawn Work

DEVELOPMENT OF DRAWN THREAD WORK.—It is produced in limited quantities in various countries, particularly in Ireland. It has been a favorite occupation from time immemorial in Turkish harems, and the popular and artistic Bulgarian embroideries are liberally interspersed with it. For some years some beautiful work has been produced at St. Augustine, Florida, and it is also found among semi-civilized workers, as in Mexico, Ecuador, Brazil, and Peru. The skill of the Mexican women in the manufacture of linen drawn work is well known. See how the thread is drawn out of a linen fabric here and there, and those that are left are caught together according to a design (often very elaborate), by which the original fabric is entirely lost sight of, but yet remains the base of the whole. With a simple square of white linen the Mexican workers will draw out threads and catch and cross and twist the strands that remain, until the result is a filmy texture as delicate as the spider's web—yet sufficiently strong to withstand innumerable washings without losing any of its graceful shape. The work is done by hand and each piece is a work of art. Note the uses of drawn work. It is used for a great variety of decorative purposes, as altar cloths, table covers, doilies, tidies, scarfs, shawls, fichus, etc.

Hemstitching.—Many household articles have been made by the application of artistic stitching, particularly a form of drawn threads called hemstitching. Artistic tablecloths, spreads, towels, and bureau scarfs can be made cheaply by the purchase of good fabrics and by utilizing our own leisure time to stitch our own designs on the fabric as described on page 266 in *Attractive Clothes*.

Hand Weaving.—Despite the development of power weaving, there is still much hand weaving in all countries. It is more economical to weave small pieces on a hand loom than on a power loom. It requires much time to make a large warp of a minimum length of many yards to start the weaving of a power loom. Then again, in all countries there still prevail hand loom workers who make the homespun in distinctive styles and patterns that have distinguished the work of each country. *To illustrate:* Harris tweed coats are made from island-grown wool of the black-faced Highland sheep of Scotland. This is spun and hand-woven by the natives of the Islands of Harris, off the coast of Scotland. The fabrics are dyed with the natural vegetable dyes that give the mellow colorings of Scottish heather. The same is true of tweeds woven in Ireland, and of the homespun woven by the natives of the hill-country of our southern states.

Hand weaving of rugs is carried on in schools as part of an art and craft movement and also at home by women who wish to use their leisure time to make attractive Oriental rugs for the home.

QUESTIONS

1. Explain the difference between the surface and structural designs. Give an example of each.
2. (a) Describe briefly the different types of standard weaves. (b) Give an example of each type. (c) Tell what method of decoration was used in each type.
3. Outline the steps in the development of spinning.
4. Outline the steps in the development of weaving.
5. Describe how fabrics were developed through use of fibers.
6. Explain how fabrics were developed by the introduction of weaves.

7. State the advantages and disadvantages of hand and machine processes in the development of fabrics.
8. Describe some of the fabrics known to the ancients.
9. Give a description of the weaves used in the fabrics of the Middle Ages.
10. Describe some of the fabrics of the modern age with reason for their development.
11. Outline briefly the development and history of rugs.
12. Describe the development and history of tapestries.
13. (a) Tell how lace originated. (b) Describe its development. (c) Outline briefly its history.
14. (a) Name the important types of lace. (b) Suggest a practical use for each type.
15. Describe some other structural fabric decorations such as: (a) hemstitching, (b) drawn thread work, (c) rug weaving, (d) hand weaving.

REFERENCES

- Atwater, Mary Meigs. *Shuttlecraft—Book of American Hand Weaving*. The Macmillan Co.
- Candee, Helen Churchill. *The Tapestry Book*. Frederick A. Stokes Co.
- Denny, Grace. *Fabrics and How to Know Them*. J. B. Lippincott Co.
- Dooley, William H. *Textiles* (unabridged edition). D. C. Heath & Co.
- Gibbs, Charlotte M. *Household Textiles*. M. Barrows & Co.
- Hess, Katherine. *Textile Fibers and Their Use*. J. B. Lippincott Co.
- The Hoover Company. *Carpets and Rugs*. (Booklet.)
- Johnson, George H. *Textile Fabrics*. Harper & Bros.
- Rathbone, Lucy, and Tarpley, Elizabeth. *Fabrics and Dress*. Houghton Mifflin Co.
- Small, Cassie. *How to Know Textiles*. Ginn & Co.

CHAPTER 12

CHILDREN'S GARMENTS

Scientific Investigations.—Recent findings of the investigations of those interested in child care and training explains to us the importance of correctly planned clothing for the best physical growth and development of sturdy infants and young children. Healthful clothing plays as important a part, in the well-being and development of a child, as adequate food, sufficient sleep, daily rest periods, play, and sunshine.

Attention is also called to the part that well-planned clothing plays in the child's social and emotional life, together with suggestions as to the importance of early and systematic development of character and training in social habits.

Selection of Children's Garments

Essential Characteristics of Clothing.—The essential characteristics that must be considered in our selection of suitable clothing for children are: warmth, weight, looseness in fit, ease in cleansing and donning the garment, and allowance for penetration of air and sunlight.

WARMTH.—The conditions which control the kinds, weight, and number of garments a child should wear are determined by the climatic conditions, the normal temperature of the home, the activities, health, and age of the child. Since all of these factors are instrumental in determining the clothing adapted to a particular child, we cannot say that all children must wear certain types and certain amounts of clothing.

WEIGHT.—The weight and amount of necessary clothing vary in the cold, temperate, and warm climates, as well as with the fall and rise of summer and winter temperature. Many authorities advise medium-weight garments for indoor wear

with heavier garments—such as sweaters, ski-suits, leggings, and warm caps for out-of-doors. If the apartment or house is evenly and warmly heated, children's undergarments must be adapted to this temperature, and cotton or linen dresses can be worn the year round. If the house is unevenly heated with cold floors, halls, or rooms, underwear must be adapted to this temperature; then cotton dresses of a heavier weight or dresses of light-weight washable wool can be worn with the addition of sweaters when the need arises. Warmth, not bulk, should be the aim for the clothing of children of all ages. Clothing must be adequate for protection. It should be light, porous, and should keep the body comfortable under all changes of temperature.

Clothing must be adapted to the health and activity of the child, for a strong, robust girl or boy who is very active becomes overheated quickly if too warmly clad. As this can be as serious as exposure to cold, extra precaution must be taken to see that the clothing is warm, but not too warm. The inactive child must, of course, be warmly clad to protect the body from sudden changes in temperature and dampness.

EVAPORATION.—Clothing worn next to the skin must be porous, in order that evaporation may take place readily.

PROTECTION.—The sensitive parts of the body, the back of the neck and the ankles, should be protected from sudden changes of temperature.

TEMPERATURE OF BODY.—Two light-weight garments are warmer than one heavy garment, because air is held between the layers and air, being a poor conductor of heat, helps to maintain the bodily temperature at an even heat.

RESTRICTION.—Garments should not restrict the body in any way. They should be properly cut and be fitted to the shoulder, allowing the weight to hang from the shoulders. Garments should be ample enough in cut to allow for the child's activity. While ample and roomy enough, they must not be bulky or hang so loose as to make the child uncomfortable by slipping off from shoulders or down at knees.

ALLOWANCE FOR GROWTH.—Clothes should allow for growth, and if this is planned for carefully, it can be arranged for in some inconspicuous way by modifying the design.

EASE OF DONNING.—The child should be trained as early as possible to form the habits of self-reliance, neatness, and self-help. Therefore, garments should be planned with openings and plackets that are practical, with easy methods of fastening, so that the child can manage them easily himself. Buttons and buttonholes should be large enough and so placed that they can be readily reached. The buttonholes must be well worked and should be substantial. Buttons should have shanks worked sufficiently large to aid in their use. Garments should be so constructed that the right and wrong sides, back and front, can be detected easily.

PENETRATION OF SUN.—Fabrics must be such as to allow the penetration of the sun rays, and they should be of smooth, soft texture so as not to irritate the tender skin.

LAUNDERING.—They must be of a firm, smooth weave, resistant to soil and easily laundered. Fabrics that do not wrinkle easily are a wise choice.

SHRINKAGE.—Materials that are thoroughly shrunk and easily laundered insure a fit until they are outgrown. Excessive shrinkage makes the garments worthless after a few washings, so purchase fabrics and garments that are guaranteed non-shrinkable.

FASTNESS OF COLOR.—If only fabrics with colors guaranteed fast to washing and sunlight are used in children's clothing, they will be attractive looking until they are worn out.

PROTECTION FROM ACCIDENTS.—Mothers are being urged to dress their children in gay-colored garments—as a protection against traffic accidents. A child in a bright-colored garment is more easily seen by motorists than one dressed in somber garments which recede into the background.

TRAINING FOR SELECTION.—As early as possible, children should be given an opportunity to express choice in regard to

fabrics and colors for their garments—so that when the time comes for them to assume some responsibility for the selection of their garments, they will have had some training to guide them.

REPAIR AND CARE.—Children's clothing should be kept in repair, well laundered and well cared for, both for school and home. Missing fasteners should be replaced on garments. It is also important to lengthen or shorten the garments to the style prevailing for children's clothing.

TO SELECT.—In selecting their clothing, designs, fabrics, and color should be chosen with as much discrimination as would be given in planning your own wardrobe.

BEHAVIOR PROBLEMS.—Children should never be forced to wear clothing that contributes to making them feel inferior to the other children, for what the child does and the way he behaves depend in a great measure upon how he is dressed. Many child problems in the schoolroom and playground can be traced to unfit clothing.

The Layette for Babies

Garment Needs.—In selecting the garments comprising the layette for an infant, the factors which must be considered are as follows:

NUMBER AND TYPE.—The number and types of garments necessary will be found to vary for the particular child. If the amount of money is limited, a minimum number of garments will be purchased. This will require more careful management and more frequent laundering. If the mother has the sole care of a child, a layette must be selected which minimizes the work of caring for the baby and its garments.

PROTECTION FROM HEAT AND COLD.—This is controlled by the season, the location of the home, and the temperature maintained in the home. Kinds and number of garments are determined by the birth month. A summer layette requires cooler fabrics, with fewer warm garments than a winter layette.

COMFORT.—All garments should be loose enough to provide for the activity of the infant. Two types of slips are in general use: the straight-cut slip, which requires the insertion of extra fullness by means of gathers, tucks, or inverted plaits under the arms; and the bias-cut slip, with sufficient lap over to allow for activity. These do not require the extra fullness of gathers, tucks, or plaits. They spread and give with the activity of the child and have the added advantage of not forming a bunch of fabric to crease and irritate the skin.

SIMPLICITY.—Sleeves should be of the raglan type, for they are more comfortable and easier to adjust than the set-in or kimono type. All wrist bands and necklines should be simply finished, loose enough not to bind. Collars that get in the infant's way and decorations, such as lace and embroidery, which irritate the tender skin should not be used. Elaborate embroidery and trimmings of ribbon are also out of place.

CHOICE OF FABRICS.—Fabrics that are supple, yet firm in weave, smooth, soft, and light in weight add to the comfort of a baby. For the first 6 months the white fabrics that do not muss or wrinkle will be most attractive in appearance. Fabrics must be easy to clean, washable, and be durable enough to withstand frequent laundering.

WORKMANSHIP.—The workmanship on infants' layettes should be simple; seams and finishes should be narrow, smooth, and flat. Edge finishes, such as facings, bindings, rolled and whipped hems, should be narrow and firmly sewed in order to launder properly.

EASE IN HANDLING.—Another important factor is ease in the dressing and handling of the baby. Garments designed for quick and easy dressing are loose fitting with full-length openings—opened either in front or back. All plackets must be long enough to allow for easy dressing. Tiny buttons too small to be readily fastened should not be used. Ties of washable linen or cotton tape may be substituted wherever practicable. They must be tied smoothly enough not to form a ridge, and must not be within reach of baby fingers.

LAUNDERING.—Garments for babies should be easy to keep clean, and they must be so constructed that they will be durable enough to stand the frequent laundering that is necessary. If the plackets or openings are long enough and planned carefully enough, they can be more easily ironed. Kimono or raglan sleeves are easier to iron than set-in sleeves.

Garments for a Baby.—The various garments worn by babies are briefly described.

DIAPERS.—The fabrics used are bird's-eye, canton flannel or flannelette, and knitted fabric or stockinette. Bird's-eye is satisfactory. It dries quickly and is light in weight. The knitted diaper comes ready-made. It is light in weight, absorbent, does not dry readily, but is expensive.

Flannelette is very absorbent and holds moisture, but requires time for drying. A new service, Sani-service, is now available in many places. They distribute and collect diapers daily.

Qualities to look for in diapers. They must not irritate the skin, and they must absorb moisture readily, dry quickly, be soft, and light in weight.

Quantity. From 3 to 4 dozens are required for satisfactory service.

Sizes. Diapers come in sizes 18 inches square to 27 inches square, or oblong from 18 inches by 36 inches to 27 inches by 54 inches. A medium size, 24 inches square or oblong 20 inches by 40 inches, is satisfactory even for the very small baby and these are not apt to be outgrown by the time the baby ceases to wear diapers.

Diapers are finished by hand (bird's-eye); by pinking or stitching (flannelette). Knitted diapers are finished by a trade overcast loop or zigzag stitch.

The diaper must be folded so as to give as little bulk between the legs as possible. The diaper may be folded rectangular in shape, or a cornucopia bias fold has been suggested by the U. S. Department of Home Economics, as being easy to handle and more comfortable for the baby.

BANDS.—The band is a very necessary part of a baby's layette for first ten days, two weeks, or as long as the doctor advises. They should be of wool and silk, or wool and cotton, very soft so as not to irritate the baby's skin. One-half yard of flannel 27 inches wide is enough to cut three of them. Tear the strips and pink them or leave unfinished; do not hem.

SHIRTS.—Baby shirts are made in cotton, wool, cotton and wool, or silk and wool. For summer, cotton shirts are very satisfactory; but wool, cotton and wool, or silk and wool should always be provided for fall, winter, and early spring. Cotton and wool and silk and wool, however, are preferable to all wool, as they do not shrink so much and they retain their softness longer.

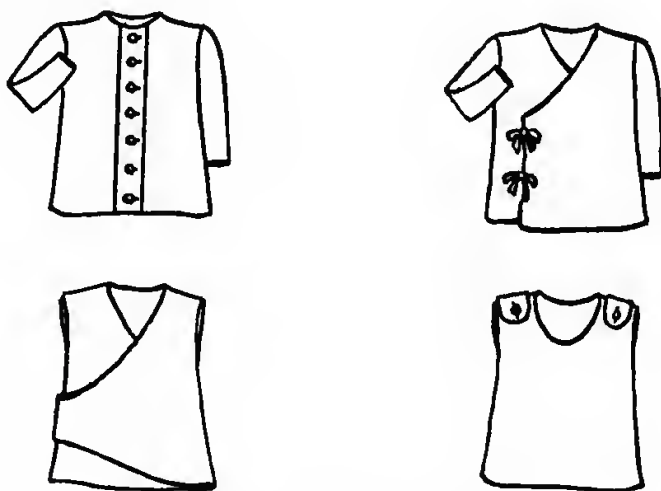


FIG. 173. Babies' Shirts

Shirts are designed with or without sleeves—the latter are sold as bands. The shoulder straps in the bands usually require refitting in order to keep straps in place on shoulders. Shirts with sleeves come opened down the front, closed back and front with shoulder opening, and double-breasted which gives extra warmth over the abdomen.

The knitted band of cotton is usually sufficient for summer, and one of the types with sleeves, wool mixed with silk or cotton or all cotton, is satisfactory for winter. Four to six shirts are required.

SLIPS.—Slips, gertrudes, or petticoats 17 inches long are made of flannel (wool mixed with silk or cotton or outing flannel), of nainsook, or long cloth. These slips are worn with thin dresses. They are plain with no plackets and buttoned on the shoulder. The seams of the flannel slip are plain, with edges opened and catch-stitched. The neck and armseye seams are finished by turning under seam allowance with catch-stitching to hold the edges flat to garment.

Nainsook slips are finished with French seams and the neck and arms are finished with a narrow bias facing or a very narrow bias binding. Dainty hand finishes may be applied.

SLEEPING GOWNS.—Gowns for sleeping for the first few months are usually very short, made of flannelette, muslin, or knitted fabrics. Blankets are 36-inch squares made of flannel or, when knitted, are oblong in shape. They are used for warmth when lifting the baby.

Winter gowns are usually made of flannelette or knitted fabric, while for summer use a firm fabric, such as broadcloth, is satisfactory. The winter garment may be made with a draw string at the bottom with sufficient length to allow for activity of the baby, or the back may be cut longer to be folded up on the front and buttoned.

DRESSES.—Dresses for the older infant are short, simple in construction, easy to care for, and dainty in appearance. Those made with raglan sleeves are satisfactory, for the armseye is roomy enough. They are easier to construct and care for than those with set-in sleeves. The placket at the back should be long, 12 inches plus, and the length of dress not over 18 to 22 inches. Hand decorations, such as tucks, featherstitching, and French knots, may be used if kept simple and dainty. Dresses for the older baby may be made with square or round yokes with set-in sleeves.

Since the well baby usually sleeps most of the time, dresses are not required in the infant's first layette. Infants' layettes do not have to be replaced during the first 9 months or a year. If the dresses are made short (18 inches), at first, they

will not need to be shortened when the baby begins to creep or walk. Rompers are very often used as soon as there is a tendency to creep, for dresses hamper the baby.

ROMPERS.—One of the necessary garments for a baby when it begins to creep or walk is known as a romper. There are many varieties, but for the creeping child it is important to meet extra requirements for comfort and activity.

Extra fullness and ease must be provided for down the back and around the body below the waistline. They must be short enough in front, and so cut at the knees that there is no interference with the knee action.



FIG. 174. Rompers

Rompers, while ample in cut and easy in fit, should not look too baggy.

The points to be considered in selection of romper patterns or in buying them ready-made are: simplicity of cut, for ease in construction; ease and convenience in adjusting; ease in care and laundering. A pattern with a minimum number of sections should be selected.

Babies at creeping age need frequent changes to keep them fresh and clean, so the style of the rompers should be one that can be ironed flat. They must be easy to adjust for frequent changing and for ease in changing diapers.

The materials used for rompers should be washable. Cottons are a wise choice. There are many varieties available—ginghams, chambray, broadcloth, cotton crepes. The fabric should be flexible, soft, and smooth in finish. They should be preshrunk or guaranteed non-shrinkable, fast to laundering and sunlight.

The one-piece romper, with raglan or kimono sleeves and buttoning across between the legs, is simple to iron and easy to put on and take off. Another type opens down the front with a flap opening from back to front. All seams should be narrow, flat, and smooth. The neck and leg openings and sleeves may be finished by binding, bias, or a shaped facing. A shaped facing at leg opening will fit more accurately and be easier to iron. Buttons should be firmly sewed with generous shanks, and the buttonholes should be of a type that will withstand many fastenings and be strong enough to keep their shape.

Colors becoming to the child should be selected; pastel tones such as yellow, green, blue, peach, pinks, etc., are all attractive and appropriate for the creeping baby.

SWEATERS.—Sweaters are worn for extra warmth whenever needed—day or night. Slip-over sweaters are more satisfactory than those buttoned down the front.

Sacks of flannel are desirable for warmth as soon as the baby begins to sit up.

KIMONOS AND BATHROBES.—These are useful where extra warmth is needed. They are usually made of outing flannel or eiderdown and may be bound with ribbon of a contrasting color.

MISCELLANEOUS.—*Stockings* are needed only for warmth and are usually worn only in winter. They must be long enough to fasten to diaper and may be of cotton or wool mixed with silks or cotton. Shoes are not necessary until a child begins to walk and then only soft shoes should be worn. These should be carefully fitted and they should be replaced as soon as they begin to be short.

Bibs may be of any absorbent fabric, finished by binding with bias commercial binding or with crochet edge. Or the edges may be turned back and decorative stitches applied.

Rubber pants should not be used for any child because the rubber prevents ventilation; they heat the baby; and the snug finishes at the waist and legs are injurious. Waterproof fabrics

which allow for ventilation may be used. Washable quilted pads may be used under the baby in carriage or bed. Rubber pads or waterproof sheeting made into pads 18 inches by 27 inches may be used to protect the mother's clothing. Waterproof sheeting of a size that can be securely fastened under and over the mattress should be used. Enough tapes may be fastened to tie it securely to prevent wrinkles.

Sheets must be long and wide enough to tuck under the ends and sides of the mattress securely enough not to wrinkle.

Caps. To be properly dressed for out of doors, the baby must have one or more bonnets. For summer wear, bonnets of sheer lawn, batiste, or handkerchief linen may be worn; but for winter a padded silk lining must be worn under the batiste or silk cap.

As the strings of a bonnet become soiled readily, ties of washable material should be used instead of ribbon.

Baby Buntings with hood attached are practical made of flannel lining or eiderdown for out-of-door sleeping.

Blankets may be all wool, all cotton, or a mixture of cotton and wool. All wool blankets require careful laundering. Small blankets may be used in the carriage and the larger blankets for the bed. If two wool blankets are provided to be used as outer covering for warmth, then the others next to the baby may be of cotton, or cotton and wool mixture. These are more easily washed and would require washing more frequently than the outer covering.

List of Garments, Minimum Requirement.—The following list indicates the number of garments which are necessary. These are minimum figures:

Diapers	3 or 4 dozen
Shirts	4—1 or 2 year size
Slips or gertrudes	3—17 inches long
Short gowns	6—18 inches to 22 inches
Wrapping blankets	4—2 flannel 36 inches square and 2 knitted 27 inches by 36 inches to 40 inches
Sweaters, sacks	4
Bibs	6

Colors for boys should be selected carefully—dainty girlish colors should not be used for them.

Garments for Recreation in Summer.—When selecting playsuits or suits for the very young child, care must be taken to select those which provide for such activities as running, climbing, jumping, and tumbling about.

A garment with roomy raglan sleeves provides for stretching and reaching better than the kimono sleeve, which is so apt to tear under the arm. The seats must have extra length and width, with the crotch low enough not to bind or restrict movement. All garments for play must be of a size that fits the child, with the allowance that has been provided for the age appropriate for the child. Garments should not be bought by age size, but should be fitted to child. They should not be bought for an age older than the age the child should wear. It would be wise to purchase fewer in number and to launder them more frequently, than to purchase more with the danger of some being outgrown before they are worn out. Garments that fall off the shoulders because they are too large annoy the child, cause him to become irritable, and are apt to restrict his play.

One-piece suits hanging from the shoulders with low necklines and wide-open armseye are most suitable, especially for the very young child.

Allowance for growth may be made in length, but the allowance for age group, as planned by the commercial pattern companies or manufacturer, should be sufficient in width for the time the child will need to wear them.

SUN SUITS.—Every part of a sun suit should be so designed that it does not restrict, and so constructed that shoulders stay in place with the waistline at the normal waistline, in order to meet requirements for all activities.

For playtime in summer, sun suits are more comfortable, easier for the child to put on and take off, and are important in our efforts toward training for initiative, independence in dressing, and good habit formation.

The materials must be durable, of a soft, smooth texture, not easily wrinkled or mussed. It must be firm enough to keep its shape and must be fast to laundering and sunlight.

Colors selected may be as bright and cheerful as desired, for they are to be worn out-of-doors. This also aids in preventing accidents if the child wanders away.

Designs should be adapted to the size of the child.

Suits without backs must be fitted more carefully or they will be uncomfortable for playtime, because they do not stay in place.

COVERALLS.—Coveralls make a satisfactory playsuit for the older child. They may be worn with or without undergarments. Denim or jean may be secured in attractive color. It is durable, launders well, but is not fast in color. Coveralls may be secured with open backs, with straps, short sleeves or no sleeves. They should be roomy and easy of adjustment.

FASTENERS.—Buttons and buttonholes should be used on playsuits. Snaps unfasten too easily for use on a garment where there is so much strain.

Hooks and eyes flatten in the laundry and become worthless for fastening.

Winter Garments.—The following qualities should be kept in mind when planning the winter playsuit:

WARMTH.—Warmth should be the first consideration, and since the average child is exposed to all kinds of weather—extreme cold, snow, and rain—fabrics should be of the type that will shed water and be windproof.

DURABILITY.—A playsuit receives hard wear, and is subject to dirt, grime, and tears; therefore, the fabric should be durable and woven closely so as not to catch on nails and broken branches.

CLEANLINESS.—Wool, while warmer than other fabrics, generally requires dry cleaning in order to keep it in good condition for wearing. It should be so thoroughly pre-shrunk that it will keep its shape and size. Colors fast to sunlight

as well as cleansing are most practical. In winter, as in summer, playsuits should be gay, attractive, and becoming in color. Bright colors do not show the soil as readily as brown or dark colors and they have the added value of safety to the child from traffic accidents.

CONSTRUCTION.—In construction, the one-piece suit, especially for the young child, has many advantages. There is no necessity for constricting elastics at waistline as it will not pull apart and let in the cold and dampness, as in the case of the two-piece suit.

PROVISION FOR ACTIVITY.—A playsuit must provide for every type of activity. There must be an easy, smooth fit across back and around shoulders and neck. Raglan sleeves are preferable, or if there are set-in sleeves they should be provided with good-sized armholes in order to provide for plenty of stretching of arms, and also to make allowance for extra underclothing and sweaters for extremely cold weather. The collar must keep out chilly winds and snow or rain, but it should not restrict the action of the head. The suit should have ample room for stretching, and the trousers must have extra width and length in the seat. It should provide protection at the wrist and ankles. Knit bands of good quality that keep in shape and have plenty of stretch are excellent, for they require no fasteners.

EASE OF DONNING.—A suit with long, center front opening from the neck almost to the crotch with a slide fastener that works easily can be quickly pulled in place by the child.

WORKMANSHIP.—The workmanship on the garment should be durable with seams of a type that are pliable, smooth, and firm. Reinforcements should be provided at all parts where there is strain and danger of tearing out from extra hard wear. Tape may be used for reinforcement.

HEAD COVERING.—Knitted caps can be either raised or lowered as necessary for protection of ears and neck, and they can be easily put on by the child without help. They are soft in feel, and they adjust smoothly and easily to the head size.

POCKETS.—Pockets are a necessity; at least one should be provided for holding a handkerchief.

Selection of Undergarments.—Undergarments for a child should be durable, washable, and absorbent. Enough garments should be provided so that frequent changes are possible.

FABRICS.—Cotton fabrics, either knitted or woven, launder easily and can be sterilized without injury to the fabric. They are durable, inexpensive, and sanitary.

TEMPERATURE.—The weight of the garments should be adapted to the temperature. For winter, higher necklines with elbow-length sleeves of heavier woven or knitted fabric should be provided. For summer, a porous knitted or light-weight muslin combination suit may be selected.

TYPES OF UNDERGARMENTS.—Combination suits sold under many trade names should possess the following qualifications: they should be ample in cut, fit well over the shoulder, and be of a shape which will stay in place. The armholes must be roomy. The crotch must be extensive enough with sufficient length from shoulder to crotch to allow plenty of stretch for activity without binding at the crotch. The garments should open in front, with drop seats, and the buttons and buttonholes large enough so that the child can button and unbutton them himself. They should have reinforcement straps for hose supporters, for these garments take the place of the separate underwaist. Buttons should also be provided for attaching panties, bloomers, or boys' pants or trousers.

PANTIES.—These are usually made of the same material as the dress; then a slip is not required unless the dress is very sheer. Panties must be full at the crotch with sufficient length between waistline and crotch. They are usually cut on a fold at the crotch and this makes a seam unnecessary there.

The waistline must be comfortable wherever a fitted band or woven elastic is used. Buttons and buttonholes must be sufficient in size to be easily buttoned. Vertical buttonholes with bars worked at each end will support both the up and down strain.

SLIPS.—Slips are necessary when a dress of transparent fabric is worn. They are one-piece garments hanging from the shoulder. They may be made to fasten on the shoulder, or they may be made with a shoulder seam. A one-piece slip is necessary for wear under dresses having a one-piece effect. A waistline division in a slip is very noticeable and spoils the effect of the dress. The trimming should be kept simple.

DECORATIONS.—Those suggested on page 388 may be used.

Dresses for the Girl.—There are many styles and designs of dresses from which to choose for every occasion to satisfy the child's needs. For the young child from 5 to 10 or 12, the most important dresses are those for simple dress-up occasions and for school or play.

FABRICS.—The materials will, of course, depend on the purpose for which the dresses are intended. Finer materials, more handwork and daintier coloring would be chosen for the "dress-up" occasion. Materials for everyday garments for school, work, or play should be durable, firm of weave, and even in texture. Since these garments must be laundered frequently, the materials should be guaranteed pre-shrunk, fast to washing and sunlight, and should be those which neither wrinkle nor show soil readily.

The design in the fabric is very important. It should be small and attractive in coloring. Plain fabrics show soil and wrinkles more than figured fabrics, so they are not as satisfactory for school and play.

Becoming colors should be chosen, and since all colors are becoming to most young children a greater variety may be worn.

At any season of the year children should be appropriately dressed for that season. Although cotton fabrics may be worn throughout the year, a heavier weight of cloth may be used with a sweater added for warmth. The advantage of cotton dresses is that they can be laundered more frequently and more easily, and since habits of cleanliness and neatness can be practiced very early this is an important consideration.

The lines of the garments should be such that they will cause no unnecessary labor in washing and ironing.

Dresses should open at the front and be sufficiently long for easy putting on without straining the neckline.

FASTENERS.—Use as few fastenings as possible. Buttons are preferable to snap fasteners or hooks and eyes. Worked or bound buttonholes are preferable to buttonhole loops which are very difficult (even for adults) to keep straight.

All fastenings should be easy for the child to manage and appropriate to the type of dress.

Armholes and sleeves should be large enough for ease of putting on, and also to allow plenty of arm action without tearing.

Necklines should be flat and smooth in finish and loose enough for comfort.

Dresses should have matching panties or bloomers, of a cut that adds to comfort and ease in adjusting. Panties and bloomers which match the dress are a valuable help in the dressing of young children, for they are easy to care for, they substitute for slips, and they wear longer than undergarments.

Boys' Clothes.—Clothes for boys should be planned as carefully as for girls. Garments that are styled right for boys—correct in cut, fabric, line, color, and appropriate for the age and purpose of the boy—will help to develop those manly qualities and traits of character so essential for their well-being in school and at home.

Avoid using feminine fabrics, colors, and types of garment even for the small boy. The boy's garments should be simple and tailored in effect in order to secure the smart, well-groomed masculine appearance so necessary for all boys.

Boys' garments that are practical should be durable in fabric and substantial in workmanship so that they will withstand the wear and tear of the boy's activities. Materials should be sturdy, easy to launder, and not easily wrinkled. Garments should be reinforced wherever there is a possibility of strain.

In construction, garments should be roomy with generous armholes, and for the little boy the raglan type of sleeve which is easy to make and care for is preferable. Blouses should have front openings. Buttonholes should be firmly worked for hard wear. Buttons should be well placed, easy to reach and to fasten.

Trouser legs should be wide enough for comfort and the seat roomy, yet not baggy. Blouses should be long enough for comfortable fastening to trousers. Extra length will provide for growth by the lowering of buttons.

SELECTION FOR OLDER BOYS.—The older boy usually wears ready-made suits, so this is mainly a problem of knowing how to select colors, lines, and textures suitable for the type of boy and the occasion. The fit around shoulders, the set of collars and lapels, the hang of sleeves and trousers are points that must be carefully examined. The tailoring, stitching, finishing, lining, and pressing are important features of the high-class suit, and any of these not skillfully done indicates average or poor quality.

Shoes and Stockings.—Children's feet at birth are usually perfect in shape. If not, a foot specialist should be consulted for corrective exercises. A young child's feet are soft and any compression is apt to cause discomfort, resulting in deformity of the feet and poor posture. It is, therefore, important to use care in buying shoes in order to allow feet to develop normally. Review Chapter 3, pages 116-127, of *Attractive Clothes*.

SHAPE AND SIZE.—A child's shoe should be shaped like his foot, with the inner line of the shoe straight, heel snug and well fitting, with narrow shank, soft flexible sole, and a roomy toe high enough to prevent pressing down on top of the toes. The size should be $\frac{1}{2}$ inch to 1 inch longer than the foot, to allow for growth and for the pressing forward of the big toe as the child walks. The heels of children's shoes vary from a single lift and spring heel for the young child to a height from $\frac{3}{4}$ inch to $1\frac{1}{4}$ inches for the older children. The shoes should be made of a soft, light-weight, flexible leather.

If not possible to have the shoes fitted by a child's shoe specialist, the shape of the foot may be drawn on paper by outlining the shape with a soft pencil as the child stands with foot on paper. This pattern of the feet may be used to secure the right type of shoe by placing the sole of the shoe on the pattern. The shoe should be $\frac{1}{2}$ inch to 1 inch longer and $\frac{1}{4}$ inch wider.

Since the child's foot grows rapidly, shoes should be watched carefully and they should be discarded as soon as they are outgrown.

Stockings should be selected with the same care as shoes, for a short stocking can cause as much discomfort and deformity of the feet as a short shoe.

Select well-shaped socks and stockings $\frac{1}{2}$ inch longer than the foot.

Cotton or lisle is the most satisfactory fiber for children's socks or stockings. Ribbed weave with closely knitted tops keep in place without garters. Buy children's hosiery in the same fashion as that of adults, two or more matching pairs so that they can be remated if necessary. Fancy, colorful hosiery is well liked by children.

EXPOSURE OF CHILDREN'S KNEES.—A mother must consider carefully whether to keep the children in socks with bare knees. In summer, or if the weather is mild and the child reacts favorably, the value of the exposure to sunlight may be valuable. In cold weather the carefully adjusted long stocking, with supporters and an undergarment well adjusted, might be better for the majority of children. Here, again, the individual child must be considered.

Miscellaneous Items for Protection Against Weather.—There are several items, such as hats, coats, sweaters, overshoes, etc., which should be mentioned here.

OVERSHOES AND LEGGINGS.—Good rubbers and galoshes (rubber) with zippers are easy for the child to adjust. Leggings to be pulled on or zipped up are more satisfactory than those carefully fitted with buttons and buttonholes. They are

absolutely necessary when the child goes to school and must put them on and take them off.

Mittens are good protection for the fingers during cold weather.

HATS.—Hats should be selected that are simple in construction for children with brims for eye protection in sunny weather. They must be selected with a comfortable headsize and be fastened with a correctly fitted elastic, so that they will stay in place on the head and be comfortable to wear. Warm caps—the knitted or crocheted helmet type—are snug fitting and protect the ears, forehead, chin, and throat during cold weather.

SWEATERS.—Sweaters are appropriate for both girls and boys. They are very serviceable and practical, and are especially valuable to use when it is too warm for heavy coats. A sweater worn under a light coat affords more protection than a heavy or bulky coat.

A slip-on sweater may serve for warmth, and may also, for everyday wear, make a practical combination with plaited skirts for girls and with trousers for boys.

COATS.—Coats with raglan sleeves should be selected because of ease in putting on. Width of shoulder and breadth of back allowance should be ample for play and activity.

The fabric should be light in weight and loosely woven with a correctly fitted lining. This will give added warmth by means of the air space between lining and coat fabric. The loosely woven fabric also holds the air in its meshes.

Pockets are necessary on coats, and the fastenings should be large and easily managed by small fingers. Coats must fit well around the neck and the collar must fit snugly and not too tight.

HANDKERCHIEFS.—Every child should have his own handkerchiefs. These may be colored cotton or linen to harmonize with the dress or suit. A good color sense may be developed by the correct use of accessories, especially with handkerchiefs, sweaters, and caps.

Construction of Children's Clothing

The first step after selecting the pattern is to check it to be sure the size is correct. See measurements in Chapter 5.

Altering the Pattern.—In altering children's patterns it is always advisable (as in those of adults) not to change the outside line, so alterations are made in center of the pattern. Decrease the measurement in any part of the pattern that is too large by laying a tuck; if the pattern is too small it may be cut apart and spread. Consult Chapter 5.

Testing the Fabric for Shrinkage and Fastness to Laundering and Sunlight.—Although it is now possible to buy fabrics which have been pre-shrunk, it is usually wise to test and pre-shrink the fabric before cutting, unless it has been guaranteed fully pre-shrunk. Pre-shrinking is apt to take away from the appearance of newness of a fabric, but the following method is comparatively safe.

Leave the material folded as purchased. Put in hot water and leave until water is cold. Do not wring, but press water out. This will prevent wrinkles. Hang the folded fabric on the line. Press well before the cloth is thoroughly dry. Test for effect of right or wrong side pressing. Consult Chapter 6.

Cutting Garments.—The same procedure is followed in cutting children's garments as in cutting all garments.

1. Straighten ends of fabric by drawing threads. Straighten fabric by stretching if out of shape. (Fig. 69 of Chapter 6.)
2. Place all parts of the pattern on the fabric before pinning to be sure there is enough fabric.
3. Observe the rules for placing on lengthwise threads. Center front and center back are usually placed on a lengthwise fold. Be sure the cloth is accurately folded on a lengthwise thread.
4. Pin all sections of the pattern securely in place, with pins placed diagonally.

5. Cut around edge of pattern with long, even strokes.
Cut notches outside of pattern lines, never inside.

Steps in Construction.—Follow outline given in Chapter 6.

Seams.—The following seams are commonly used in making children's garments.

PLAIN SEAMS.—Plain seams are suitable for dresses when the material is one that does not fray easily. They are simple to make and give the garment a better appearance on the right side. The edges of plain seams may be finished in different ways after they have been pressed open. Consult Chapter 6.

They may be overcast if fabric frays.

They may be pinked if the material does not ravel.

They may be bound with tape on woolen or silk fabrics. These should be used on unlined garments (such as coats) if the wrong side of garment shows.

The edge of seam may be turned toward garment and the edge stitched separately from garment.

FRENCH SEAM.—Used for undergarments and baby dresses. They should not be wide. Place the two wrong sides together and stitch $\frac{1}{4}$ inch from edge. Trim, leaving $\frac{1}{8}$ -inch seam.

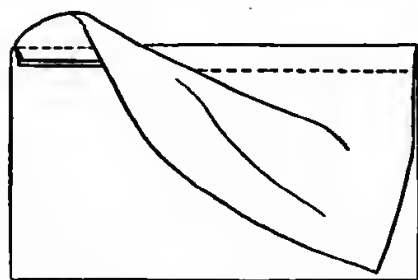


FIG. 175. French Seam

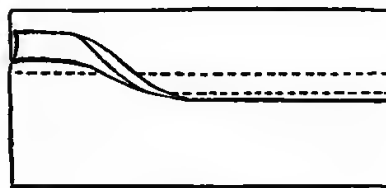


FIG. 176. Flat Felled Seam

The first row may be stitched by machine even if remainder of seam is made by hand. Press stitching. Turn with right side out, crease the first seam directly on edge. Baste and sew with combination stitch $\frac{1}{8}$ inch from edge. This will enclose edges inside seam. Be sure that no threads of first seam show on right side. (Fig. 175.)

FLAT FELL SEAM.—Bloomers and boys' shirts and trousers require flat fell seams. A stitched fell seam is made by placing the two wrong sides together and stitching on the seam line. Trim one side of seam to within $\frac{1}{8}$ inch of the stitching. Crease along the line of stitching, fold the wide edge over the narrow, turn edge of wide side under, and baste. Stitch flat against the garment near the edge. The two stitchings will be on the right side. Make finished seam about $\frac{1}{4}$ inch in width. (Fig. 176.)

LAPPED SEAMS.—Lapped seams are used on dresses, undergarments, coats, trousers, and tailored garments. They are especially desirable for joining a skirt to a blouse and for applying yokes to blouse or skirt.

To make lapped seams, turn one edge under on the seam line and press. Place it over the corresponding edge with seam edges coinciding and stitch near the edge. (Fig. 177.)

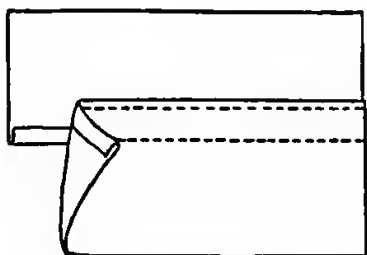


Fig. 177. Lapped Seam

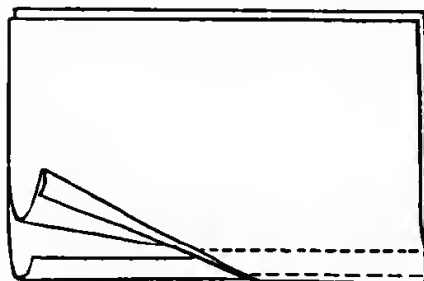


Fig. 178. Turned-in Seam

TURNED-IN SEAM.—This is an imitation French seam or false French seam. This seam is used where there is a design to be matched and where it is desirable to secure the effect of a French seam. Stitch the seam as for a plain seam on the wrong side. Turn in the edges toward each other, and baste them together. Run by hand or stitch by machine close to the fold. This seam launders well and may be substituted for French seam. (Fig. 178.)

FELL FRENCH SEAM, OR STANDING FELL.—Stitch on wrong side as for plain seam, trim off the edge nearest you. Turn the projecting edge with $\frac{1}{8}$ inch fold, hem this fold to the

seam line or machine stitch. It can be made with the fell attachment. Suitable for children's undergarments. (Fig. 179.)

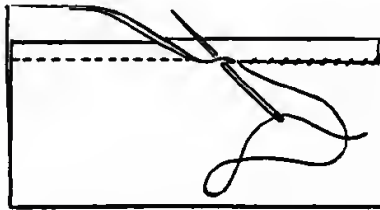


FIG. 179. Standing Fell Seam

Gathering by Hand.—Use an even running stitch for sheer materials, uneven for heavier materials, taking up on the needle one-half the amount passed over. (Fig. 180.) The space to be gathered should be divided into equal parts (halves or quarters), and also the section to which it is to be applied. Use a knot and fasten it securely by two backstitches. Put the needle into the material at the beginning of the row of sewing. Grasp the material and the point of the needle between the thumb and forefinger of the right hand, the first finger of the right hand under the material. Grasp the material between the thumb and forefinger of the left hand. Hold the material taut. The distance between the first fingers of both hands should be about $\frac{3}{4}$ inch. Move the needle in and out through the material, taking tiny stitches. Push the material off the needle as it becomes too full.

It is usually advisable to put in two rows of gathers to aid them in falling into place more readily. After the gathering has been run in, pull it up tightly, holding the top of the gathers with one hand and pulling down with the other. With sheer material, this will be all that is necessary. However, the gathers of heavier materials must be stroked.

To stroke gathers, pull the thread up so that the gathers are as close together as possible, and place a pin at right angles to the stitches. Wind the thread around the pin in the form of a figure eight. Then take a coarse needle and, with the side of the eye, push each little plait under the thumb and press. Do not draw the needle down the material, as this scratches the fibers, tending to weaken them. (Fig. 180.)

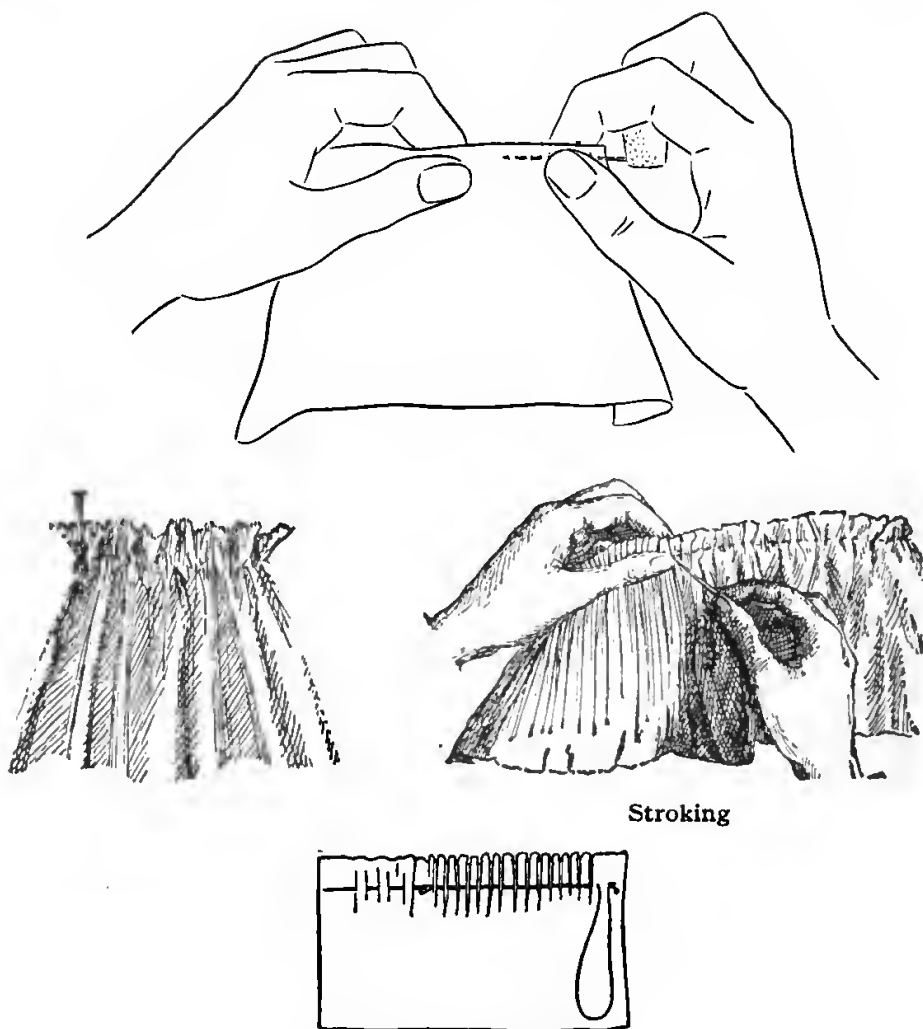


FIG. 180. Gathering

For machine gathering with or without an attachment, consult Chapter 10.

For shirring by machine, consult Chapter 10. See later in this chapter for discussion of shirring by hand.

Hemmed Placket for Baby Dresses.—Cut the opening along a thread of the fabric. Then on the left side of the opening, turn $\frac{1}{8}$ -inch hem, tapering it to nothing at the bottom. On the right side, turn a $\frac{3}{8}$ -inch hem. Lap this over the left side, and at the bottom place two rows of backstitching $\frac{1}{8}$ inch apart. (Fig. 181.)

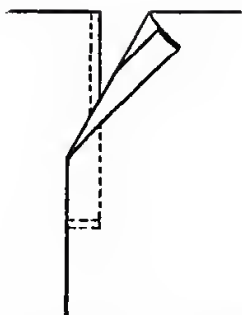


FIG. 181. Hemmed Placket

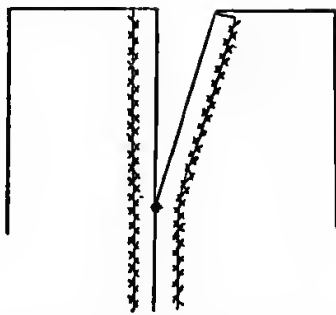


FIG. 182. Flannel Placket

Flannel Placket.—A placket used on flannel garments is made as above, without turning in the edges of the flannel. Catch-stitch the hem in place and feather stitch on right side. At the bottom, to prevent tearing down, a looped bar is worked. (Fig. 182.)

Bound and Faced Placket for Underwear.—This is sometimes called the modified or L placket. This placket has the strip or lap stitched on, as in the continuous placket, except that the side (right side of opening) that is to be folded back on the garment is cut to within $\frac{1}{2}$ inch of the bottom, and to $\frac{1}{4}$ inch of the folded center line of the strip. Stitch or hem the underlap in place, as in a continuous placket. Then fold back the facing and baste it in place. This must be hemmed or stitched down and across the bottom of the facing. It may be cut before applying if desired. (Fig. 183.)

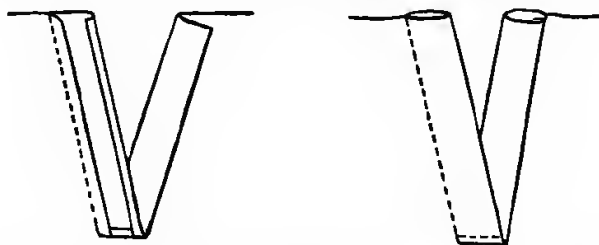


FIG. 183. Bound and Faced Placket Suitable for Children's Garments

Buttonholes.—Buttonholes are a necessary feature for children's garments, and they cannot be eliminated by fashion experts as they are in adult garments. The buttonhole is made by cutting an opening in the fabric and reinforcing its edges

by stitches. It may be done by machinery or by hand—called a “worked” buttonhole stitch.

There are three types of worked buttonholes: one with a fan at one end and a bar at the other; a second with a bar at each end; and a third called the tailor’s buttonhole. Sometimes on children’s garments, where there is a strain at both ends, we find buttonholes made with a fan at each end, as in children’s bloomers and drawers. There are several steps in the making of a buttonhole, each equally important.

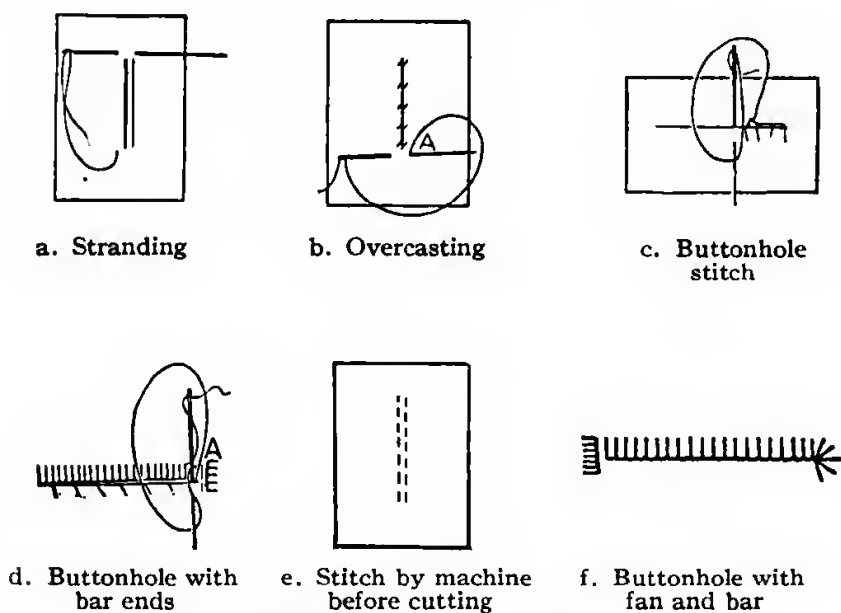


FIG. 184. Barring and Overcasting Buttonholes

MARKING LOCATIONS OF BUTTONHOLES.—With a bar and fan, buttonholes are made on the upper side of the closing at right angles to the edge and so placed that they are $\frac{1}{4}$ inch from the edge of the fold. In the front of a shirtwaist, they are placed parallel to the edge of the fold, in the center of the plait or hem. Mark the position for the top and bottom buttonholes and divide the spaces between evenly. A buttonhole should be cut $\frac{1}{8}$ inch larger than the diameter of the button and on an exact thread of the material. Use a pin prick to measure the length of the buttonhole if buttonhole scissors are not at hand. If buttonhole scissors are used, test

the length of the slit on paper, and then make a straight cut with one movement of the scissors.

BARRING BUTTONHOLES.—Buttonholes are strengthened with *bars* to prevent the edges from stretching. Bring the needle up at one end and allow the thread to lie parallel with the cut on the right side, then put the needle down at the opposite end. Do the same on the opposite side of the cut. If the material frays badly, reinforce it by machine stitching or with a running stitch before cutting, or overcast the edges after stranding. (Figs. 184a, b.)

OVERCASTING.—Buttonholes are also prepared by *overcasting*. Make five overcasting stitches along one side of the slit; turn the work, and make five overcasting stitches on the other side of the slit.

The last overcasting stitch should be directly opposite the first; bring the needle up through the slit at the right. Hold the slit across the first finger of the left hand. Bring the needle out one thread of material below the overcasting stitches. Take the thread as it comes out of the eye of the needle and pass it under the point of the needle from right to left. Keep the thumbnail of the left hand on the bottom of the stitch and draw the thread straight up from the stitch, keeping the thread near the material. This will place the purl directly on the raw edge of the cut. (Fig. 184c.) Repeat the buttonhole stitch to the end of the cut, being careful to keep the depth of the stitch the same and the stitches close together, but not crowded. Now bring the needle up and make three stitches the length of the buttonhole stitches at right angles to the cut, close to the buttonhole stitches. This is called the *bar*. Make five loop stitches over the bar; the third or center stitch should be taken through the cloth. This will keep the stitches turned toward the buttonhole and thus strengthen the cut. Continue the buttonhole stitch to the other end and make another bar at the opposite end. (Fig. 184d.)

FAN AND BAR.—In working the buttonhole with a *fan and bar*, proceed as in making the barred buttonhole until the end of the buttonhole near the fold is reached. Then take the

stitches on a slant, inserting the needle at an angle, making five stitches in the fan and being careful not to increase the length of the stitches around the fan. (Fig. 184f.)

Pockets.—Children's garments should have pockets. One pocket for a handkerchief will prevent many lost handkerchiefs. Pockets should be placed conveniently in garments at the right placing for small hands. Patch pockets are strong if reinforced with stitching or tape.

Bound, welt, or lap pockets may be used to decorate school dresses or boys' blouses. Pockets are convenient for boys' shorts and trousers.

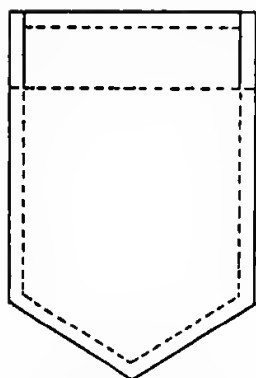
PATCH POCKET.—The size and shape of this type of pocket is determined by its location and the size of the garment upon which it is placed. The finish at top of pocket may be a hem, a shaped piece, or binding to match the binding on other parts.

TO MAKE POCKET WITH HEM.—Crease the seam allowance around the pocket piece to the wrong side, then crease the hem allowance. Clip out the seam allowance at *A* and *B* (Fig. 185). Trim out the small diagonals (at the hem allowance). Fold the hem at the top in place, baste, and stitch. Fold under the seam allowance on the sides and bottom; clip diagonally across the corners to make them lie flat.

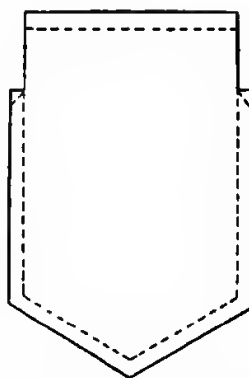
Stitch the pocket piece $\frac{1}{8}$ inch in from the edges, and finish the top of the hem by stitching or hemming. Baste the pocket in place; edge-stitch to garment. Reinforce the top of pocket by stitching over the ends of hem twice.

PATCH POCKET WITH SHAPED FACING.—Stitch the trimming piece right side to wrong side of pocket, turn facing to right side, turn under edges, then baste and stitch the pocket in place. Two shaped facings are shown (Figs. 186a, b).

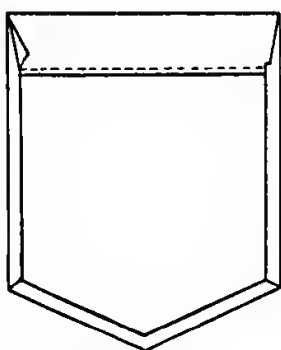
DOUBLE PATCH POCKET.—Cut two pieces exactly alike, place two right sides together, baste, stitch seam allowance from edge around pocket leaving space for turning, press seams, turn, and close opening by alternate slip-stitching. Baste around edges, press, baste pocket in place and edge-stitch, and again $\frac{1}{4}$ inch from edge.



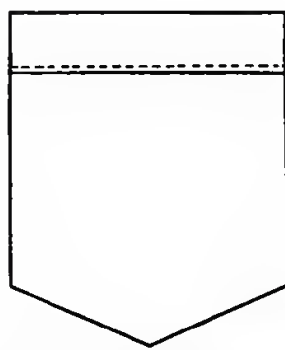
a. Crease hem allowance



b. Cut off on overlap

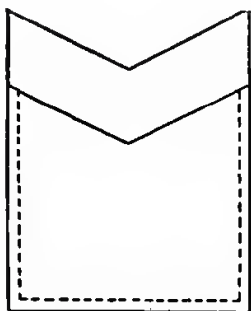


c. Wrong side with edges turned back

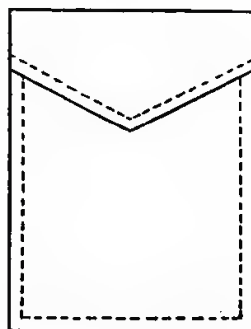


d. Right side stitched in place

FIG. 185. Patch Pocket



a. Shaped lap



b. Plain lap

FIG. 186. Patch Pockets with Lap

BOUND POCKET AND WELT POCKET.—For methods of making bound pockets and welt pockets, see Figs. 235 and 236 in Chapter 13.

Trimmings for Children's Garments

Children's clothing should be kept simple but attractive. Bias folds may be applied on children's garments. Plain fabric on a checked, plaid, or figured fabric or a contrasting fabric on a plain dress.

Edges and Hems.—Various kinds of finishes are explained below.

PLAIN FOLD.—Cut the bias twice the desired width of finished fold. Fold each edge of the bias to the wrong side with edges meeting. Baste, being careful not to stretch the folded edges. Press lightly. The fold is pinned and basted on the garment and then edge-stitched to the garment. (See Fig. 225b, Chapter 13.)

METHOD OF FOLDING BIAS STRIPS.—Large needles placed parallel about 3 inches apart on an ironing board or three threads may be used—folds drawn through and pressed as folds pass—from under stitches or needles. (Fig. 187.)

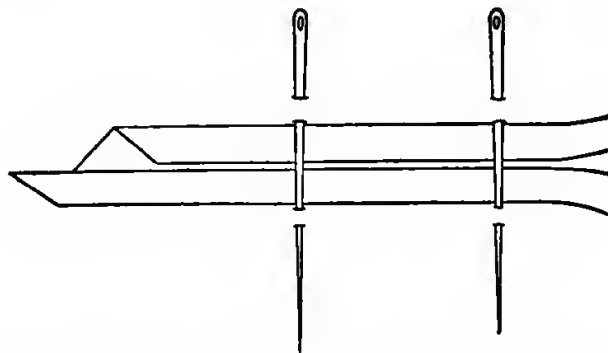


FIG. 187. Pinning Bias Strips to Ironing Board to Fold the Edges

FRENCH FOLDS.—French folds make an attractive finish for children's garments. To make—cut the bias three times the desired width when finished. A fold $\frac{1}{4}$ to $\frac{3}{8}$ inch makes

an attractive fold. Fold one edge over $\frac{1}{8}$ inch beyond the center on the wrong side, and baste. Fold the opposite edge over until the edges almost meet, and baste. Then fold the narrower side over against the wider, enclosing the raveled edges in the fold and baste to place. Handle lightly so that the folds will appear rounded. (Fig. 225a.) Slip-stitch if on silk, stitch for washable garments. These may be attached by machine.

BRAID AND COMMERCIAL BIAS BINDING.—These bindings may be applied to the edges of garments and make a practical trimming. Ready-made binding may be purchased, made of lawn, percale, nainsook, organdy, and silk, in white and attractive colors. The color may match the garment or may be a harmonizing color. Use the binder attachment (Fig. 131, Chapter 10).

LOOPED SHELL EDGE.—Fasten the thread in the narrow hem. Bring the needle out on edge of fabric. Put the needle through the edge of hem about $\frac{1}{4}$ inch forward, forming a loop extending from the hem. Make a small loop-stitch over both threads, draw this tight, then make three more loop stitches beside No. 1 stitch. They must be close together. From the last stitch make another loose loop and continue. Keep the large loops close to the fabric and of uniform size. (Fig. 188.)

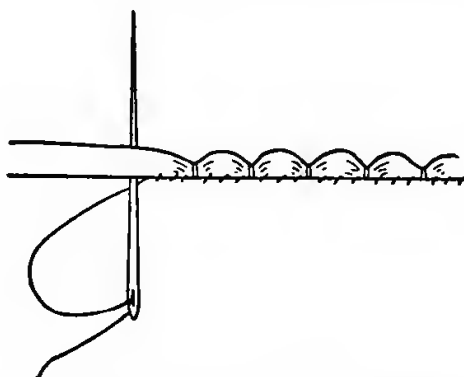


FIG. 188. Scalloped or Shell Edge

All of the stitches illustrated in Chapter 11 of *Attractive Clothes* and Figs. 192 and 193 of this volume are suitable for children's wardrobe.

PLAITING.—Narrow novelty plaiting may be purchased ready-made, or it may be made by machine (Figs. 151-153).

SHELL HEM.—Shell hems are made by taking two over-stitches, then running stitches to the next point where the material is to be caught; or if the hem is wide, the overstitches are taken and the needle slipped inside the cloth to the next point for overstitches. Usually there is a $\frac{1}{4}$ inch space on a narrow and $\frac{3}{8}$ inch on a wide hem. The former is used at the top of a garment and the latter at the bottom.

FANCY HEMS.—Fancy hems and scalloped hems may be used on the bottom of children's fine dresses. The design is traced on the wrong side of the fabric and basting is put on the design in order to trace it to the right side for working. (Fig. 189a; see also *Attractive Clothes*, Fig. 87j.)

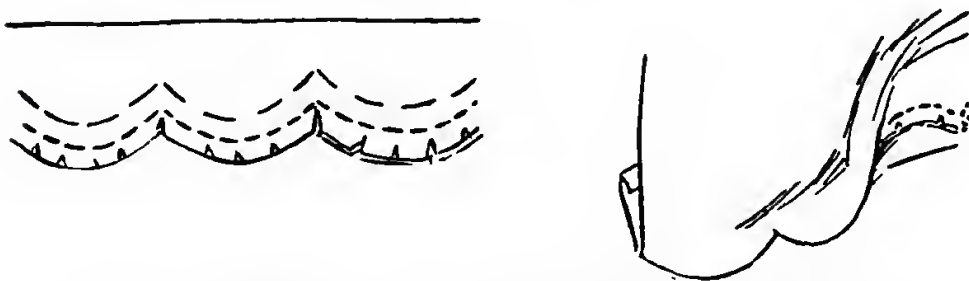


FIG. 189a. Scalloped or Curved Hems (wrong and right sides)

RUNNING STITCH HEM.—Running stitch hems are used on infants' fine garments, and on sheer fabrics where it would not be advisable to use hemming. (See Fig. 201, Chapter 13.)

ROLLED HEMS.—Rolled hems are sometimes used where it is necessary to have a narrow hem on a slight curve. Place a row of machine stitching close to the edge with fine cotton; it will aid in rolling and it will be more durable. To make it, hold the material with the wrong side up, and roll the hem toward you between the thumb and forefinger of the left hand. Hold the work firmly between the right and left hands and raise and lower the roll until it is firm. The stitches used to hold the roll in place are small slanting stitches taken over the roll; point the needle under the roll away from you. Do

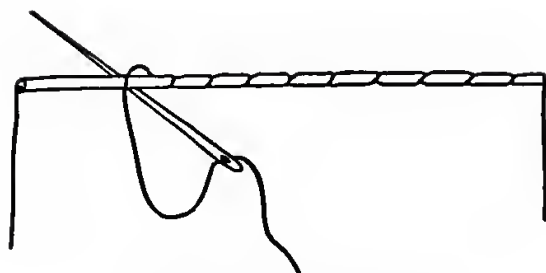


FIG. 189b. Rolled Hem

not catch into roll. These are called whipping stitches. (Fig. 189b). A hemming stitch or slip stitch may be taken as on other hems but do not flatten the roll. (See Fig. 202, Chapter 13; see also *Attractive Clothes*, Figs. 87g, h, i.)

OVERCASTING.—Overcasting may be done in both directions as a finish where lace is not applied. Pin hem $1/16$ to $1/8$ inch in width. Hold the edge away from you, wrong side up, and make the first turning toward the wrong side as narrow as possible, and the second turning as narrow as the material will allow. Do not baste narrow hems if they can be managed without. (See page 233.)

Other Finishes.—The material of the garment may be used as decoration. Shaped facing applied on the right side, collars and cuffs, pockets, ruffles, or plaiting. Tucks, gathering, shirring, and smocking are ways of inserting the needed extra fullness as a feature of the design.

SHIRRING.—Shirring may be done by hand or machine. Several rows of gathers, evenly spaced, may be used to take care of necessary fullness. Draw shirred fabric up tight and pull downward. Release and fit into space. A reinforcement must be used underneath to hold in place.

For machine shirring, see Chapter 10.

To shirr without an attachment, lengthen the stitch, loosen the tension slightly, and, with the presser foot as a guide, put in the required number of straight rows of stitching. Gather these up by pulling all the bottom threads. Slip the material along on the threads until the shirrings are drawn up to corre-

spond to the space to be attached, pull the ends of thread to wrong side, thread each into a needle, and secure each row with several fine whipping stitches.

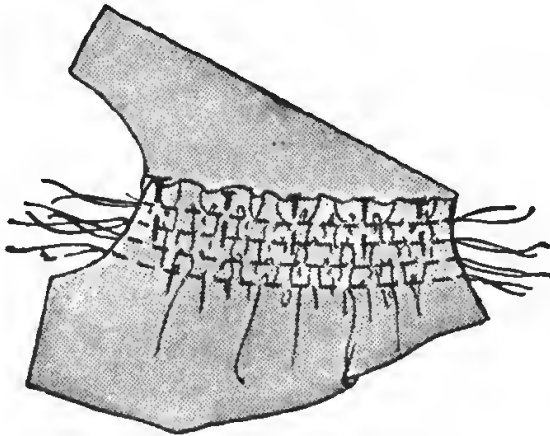


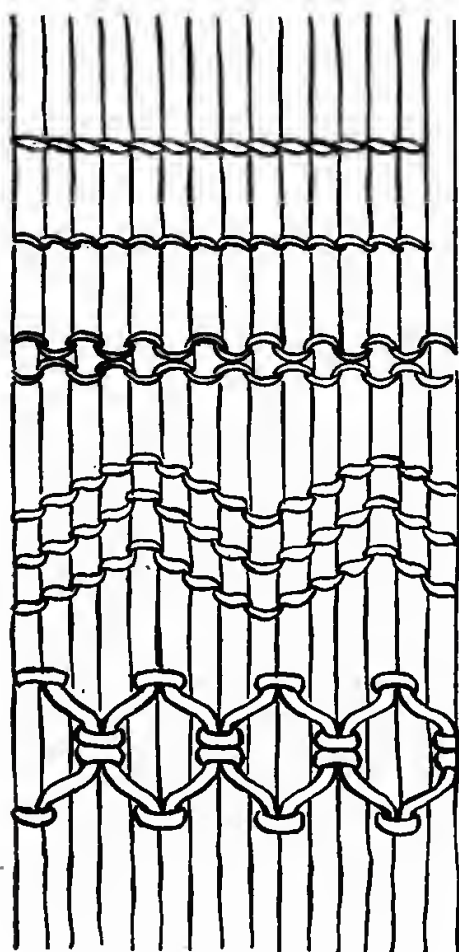
FIG. 190. Shirring by Machine or Hand

SMOCKING.—One of the simplest and most appropriate forms of decoration for children's garments is smocking. Many attractive combinations of a few simple stitches can be used with excellent effort. Before applying the decorative stitches, the material must be gathered so that the fullness is laid in straight even folds. The size of the folds depends upon the amount allowed for fullness. If it is scant, $\frac{1}{8}$ -inch fold may be laid; if much fullness is allowed, the plaits may be larger. (Fig. 191.)

There are three methods of laying plaits for the decorative stitches.

Dots evenly spaced may be stamped on by use of a commercial pattern or chalk, or pencil dots may be made on the wrong side of material. Pass a thread through each dot in each row, and draw up the threads and fasten around pins at the left. The dots of the commercial design are sometimes difficult to remove.

Another method is to run gathering threads evenly spaced. Each gathering thread is placed directly under the corresponding one in the previous row. The length of the stitches will depend upon fullness allowed. Spaces between rows may be



a. Outline stitch

b. Crewel stitch

c. Cable stitch

d. Wave stitch

e. Diamond smocking

f. Honeycomb smocking

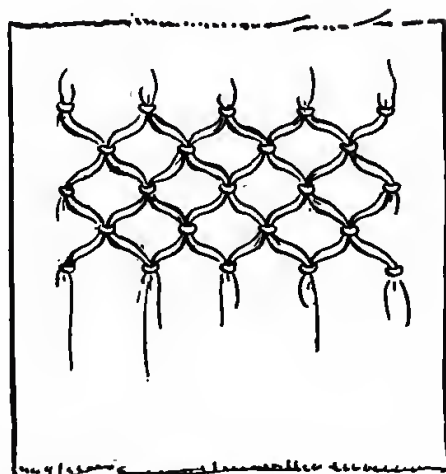


FIG. 191. Smocking

from $\frac{1}{2}$ inch to 1 inch apart. If the space to be smocked is curved, $\frac{1}{2}$ inch is better. For a straight space of smocking, $\frac{3}{4}$ inch to 1 inch spacing will be sufficient.

The third method is by machine. This is very satisfactory and it can be accomplished in much less time. Lengthen stitch and draw up as for shirring.

To hold the smocking securely enough not to give too scattered an effect, place a straight line or lines of stitching at the top and bottom of design, and as many as necessary in between. Each stitch is worked by passing the needle through the top of each plait. The outline stitch is the one most frequently used (Fig. 191a). However, in order to secure variety the crewel stitch may be used, in which the thread is held below the needle in passing through the top of plaits. The work progresses from left to right in a straight line. (Fig. 191b.)

The cable stitch is a combination of the outline and crewel stitches. The first row across is worked by holding the thread alternately above and below the needle. The second row starts with the thread below the needle and then above the needle, the second row is worked close enough so that the two stitches come close together. (Fig. 191c.)

Wave design in smocking is made with the outline stitch. Make three or five outline stitches in an ascending diagonal line, taking one stitch in each succeeding fold of plait, holding the thread below the needle. At top take a straight stitch in next plait. In descending, keep the thread above the needle in taking the stitch in each succeeding plait, keeping the stitches directly opposite the ascending stitches. As many rows as desired may be placed close to each preceding row, forming a wave-like design. (Fig. 191d.) To form a diamond follow the same procedure, except go diagonally down instead of up and keep the stitches directly under those going up. (Fig. 191e.)

The plain or honeycomb smocking is made by taking a stitch through two folds, bringing them together. Slip the needle down inside the second fold, bring it out, and take a double stitch over second and third plaits to fasten them to-

gether. Slip the needle up inside plait three and bring plaits three and four together with a double stitch directly on a line with first stitch. Continue working up and down to end of row. Make as many rows as called for in design. (Fig. 191f.)

The working thread may be left on top instead of carrying inside plaits for another variety.

Dots may be worked on top of plaits, forming flower designs. Lazy daisy stitch may be used. Feather stitching or catch-stitch may be worked on top of plaits. Any combination of these stitches may be planned, but care must be taken in planning not to leave an unfinished design at either end. When design is finished remove the gathering threads, thus allowing the fabric to spread.

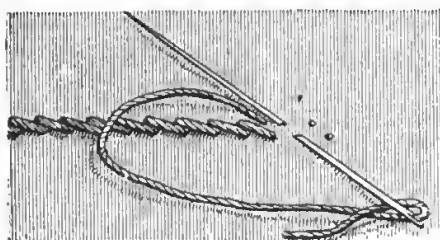
Smocking designs must be worked on the garment before cutting out the garment, and they must be carefully planned to be in proportion to the garment upon which they are worked.

Embroidery Stitches.—The following embroidery stitches are suitable for decorative finishes on infants' and children's garments.

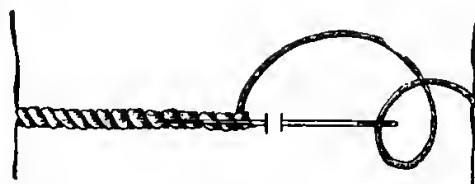
OUTLINE OR KENSINGTON STITCH.—This is used for outlining designs, or it may be used on children's garments to hold a hem in place. It is composed of a series of regular overlapping stitches. Fasten the thread by a series of running stitches along the design. Bring the thread through and take a short slanting stitch, bringing the needle out to the left of the stitch, keeping the thread below the needle. (Fig. 192a.)

CREWEL STITCH.—The crewel stitch is similar to the outline stitch, except that in this stitch the thread is kept above the needle. (Fig. 192b.)

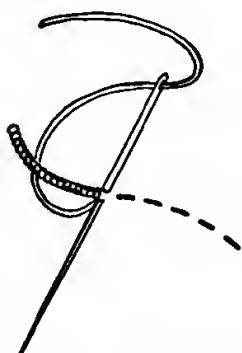
STEM STITCH.—In order to make the stem stitch, first pad the outline or design with darning cotton, using the running stitch or outline stitch. Then whip over and over this padding stitch, taking the stitches through the material and very



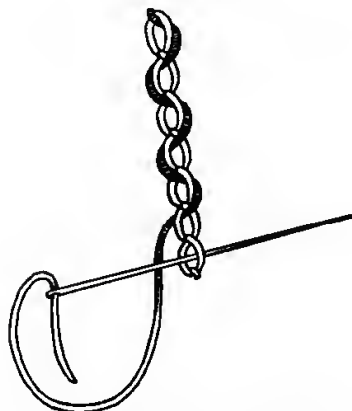
a. Outline or Kensington stitch



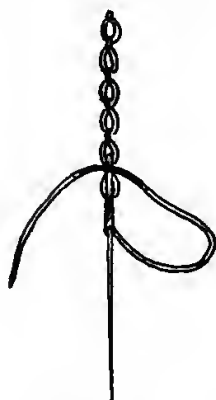
b. Crewel stitch



c. Stem stitch



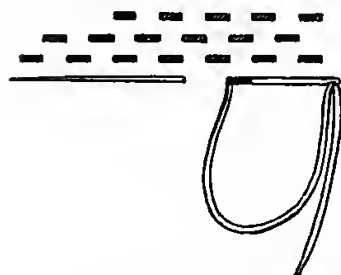
d. Overcasted chain stitch



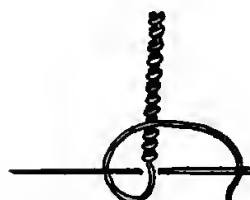
e. Split chain stitch



f. Twisted chain stitch



g. Seed stitch



h. Snail trail stitch

FIG. 192. Embroidery Stitches for Children's Garments



a. Plain running stitch

b. Overcast running stitch

FIG. 193. Running Stitches

close together, but not overlapping and keeping the edges perfectly even. The stitches may be taken straight with grain of cloth on which it is being worked, or diagonally. The beauty of this stitch lies in its evenness. (Fig. 192c.)

CHAIN STITCH.—Bring the needle out at the starting point. Put the needle in same hole from which the thread came out. Bring the needle out toward you $\frac{1}{8}$ inch below, directly under the emerging threads. Let the loose thread form a ring or hold it with the left hand. Draw the needle out, forming a loop. Each stitch is formed in the same way—a loop within a loop. Woven chain stitch with contrasting color is shown in Fig. 192d.

SPLIT CHAIN STITCH.—In taking the stitch bring the needle up through the thread itself and take a short backstitch through the thread. Start as for chain stitch. Heavy embroidery cotton is required. (Fig. 192e.)

TWISTED CHAIN STITCH.—In making the stitch, start as for the chain stitch, but put the needle in diagonally under the thread. This will form a ring. Bring the needle up through as shown in Fig. 192f. Form another loop and take another diagonal stitch. Keep loops uniform.

SEED STITCH.—To make the seed stitch, first take a tiny backstitch to form the seed stitch. Then skip a space equal to twice the length of the seed stitch and take another backstitch and so continue. This is attractive as part of a border. (Fig. 192g.)

SNAIL TRAIL STITCH.—Put the needle in the fabric at

right angles to the line to be followed and bring the thread around the point of the needle as in Fig. 192h. Draw each knot close to the material.

RUNNING STITCHES.—Plain white running stitches or those with touches of color are practical. (Fig. 193.) Running stitches may outline parts of the garment or may follow designs applied to dress.

Fabrics for Children's and Infants' Garments

Fabrics which are used in the making of children's garments are listed below. Various widths of materials are designated, and suggestions are made for appropriate selections for garments.

BATISTE.—Soft, thin cotton fabric made from fine yarn. Infants' and girls' fine dresses. Widths, 30"-36"-45".

BIRD'S-EYE.—A distinctive weave—small geometric pattern resembling a bird's eye. Diapers, cotton or linen. Widths, 18"-20", 22"-24", 27"-30".

CANTON FLANNEL.—Heavy cotton fabric with twilled surface on one side and long, soft nap on the other. Diapers, sleeping garments, sacques, and blankets. Widths, 27"-36".

CHAMBRAY.—A type of gingham of plain weave, plain-colored warp, white filling. Children's dresses and rompers. Widths, 27"-30".

CORDUROY.—Heavy ribbed material with pile. Cotton velvet having ridges or cords in the pile. Children's suits, bathrobes, infants' wraps, and carriage robes. Widths, 36"-40".

CREPE.—Thin material of plain weave with crinkled surface. Play dresses, suits, and kimonos. Width, 29".

DAISY CLOTH.—Trade name for twilled outing flannel. Infants' garments and diapers. Widths, 27"-36".

DENIM.—Heavy cotton fabric, twill face and plain back. Overalls and children's playsuits. Widths, 28"-29".

DIMITY.—Light-weight, fine cotton fabric with corded stripes or bars. Infants' and children's dresses. Widths, 30"-32".

DOTTED SWISS.—Thin material woven with dots. Children's dresses. Width, 36".

DRESS LINEN.—Medium-weight, white and colored. Girls' dresses and boys' suits. Width, 36".

EIDERDOWN.—Thick, soft fabric with heavy nap on one or both sides. Light and fluffy. Infants' bathrobes, kimonos, blankets, and sleeping garments. Widths, 27"-45".

FLANNEL.—Light-weight, washable, soft woolen fabric with napped surface.

Baby flannel. White, soft, woolen fabric. Smooth or napped surface. May be cotton with slight percentage of wool. Infants' garments. Widths, 25"-27"-30"-36".

FLANNELETTE.—Cotton fabric, napped on one side. Plain, striped, or printed. Kimonos and blankets. Widths, 27"-30".

FLAXON.—Crisp, finished cotton. Made from combed yarns, gassed and mercerized. Infants' dresses and children's fine dresses. Widths, 32"-40".

GABARDINE.—Mercerized cotton with raised cord on right side. Boys' suits and girls' school dresses. Width, 36".

GALATEA.—Strong, close twill weave. Durable. Boys' playsuits. Width, 27".

GINGHAM.—Yarn-dyed fabric, woven in checks, plaids, stripes, or plain color. Children's clothes. Widths, 26"-32".

HANDKERCHIEF LINEN.—A light-weight linen fabric like lawn. Plain or barred. Infants' and girls' dresses, and boys' blouses. Width, 36".

INDIAN HEAD.—Grade-marked cotton fabric; smooth light-weight cloth. Children's play clothes; middies, white or colored. Widths, white 18"-63", colored 36".

JERSEY.—Plain, knitted fabric. Wool or cotton, or wool and cotton mixed. Light-weight fabric, tending to stretch. Knitted in tubular form. Boys' suits, and girls' dresses and skirts. Any width.

LAWN.—Light-weight, thin material usually sized and highly polished. Stiff or soft in finish. White, dyed, or printed. Girls' dresses. Widths, 27"-36"-39"-45".

LONGCLOTH.—Light-weight, unfinished, bleached muslin, free from starch or sizing. Children's undergarments. Width, 36".

NAINSOOK.—Fine, soft-finished, white cotton fabric with a polish on one side. Heavier than batiste. Infants' wear and children's underwear. Width, 36".

ORGANDY.—Thin, transparent, stiff muslin made of fine cotton yarns. Can be bought with permanent finish. Children's dress-up dresses, or trimmings. Widths, 36" to 70".

OUTING FLANNEL.—Soft, light-weight, cotton fabric napped on both sides. Highly inflammable. Soils quickly. White, colored, or striped. Children's sleeping garments and underwear. Widths, 27"-32"-36".

PERCALE.—Closely woven, printed cotton fabric; stiff finish. Solid colors or white. Children's dresses and boys' blouses. Width, 36".

PERSIAN LAWN.—Fine, white sheer fabric. Infants' dresses. Children's fine dresses. Widths, 29"-32".

PIQUÉ.—Cotton fabric, white, colored, or printed with raised cords or welts running lengthwise. Children's dresses, infants' coats, and carriage robes. Widths, 27"-36".

POPLIN.—Fine, cotton ribbed fabric, usually mercerized. Children's suits and dresses, and boys' blouses. Widths, 27"-32"-36".

PRINT.—General name for a printed cotton fabric. Children's dresses. Width, 36".

SEERSUCKER.—Light-weight, cotton fabric with crinkled stripes. "Ripplette" is a trade name. Children's dresses, undergarments, and boys' suits and blouses. Widths, 29"-32".

SOIESETTE.—Trade-named fabric of smooth, even texture. White, plain, colored, or prints. Children's dresses, suits, and boys' blouses. Widths, 31"-32".

STOCKINETTE.—Elastic fabric, knitted flat or tubular. Infants' and children's dresses, winter sleeping garments, and diapers.

VOILE.—Thin, transparent, light-weight fabric. White or colored. Children's dresses. Widths, 36"-40".

Care of Children's Clothing

Good habits in the care of clothing should be practiced as early as possible. If children can have a place of their own in a closet which is arranged with hooks placed low enough for them to hang up their garments when taken off and which contains a rack for shoes, rubbers, or galoshes, they will soon form orderly habits.

For successful training of children every opportunity should be utilized.

Aids in Training Child.—These suggestions will help:

1. Hooks low enough in closet so that a child can hang up his own clothing.
2. Small hangers for the child's clothing is a good investment, for they take up less room besides keeping the child's clothing in better shape.
3. A shelf at bottom of closet to keep shoes, rubbers, and galoshes off the floor.
4. A small chest, dresser, or at least a drawer low enough for the child to reach. Divisions in the drawer should be made for undergarments, night clothing, handkerchiefs, and small accessories. The top of the dresser will provide a place for training a child to keep his toilet articles in place.

Every child should have his own hair brush, comb, hand brush, wash cloth, tooth brush, and cream, soap, and towel. If each child has an assigned color, articles can be easily identified.

A place should be provided for children's soiled clothing and they should be trained to dispose of them. If children are taught how to use toilet tissue and how to dispose of it, a great deal will be accomplished in the prevention of colds. There should be provided enough changes of underclothing to insure cleanliness. Children should be encouraged to change to playsuits, and don aprons for home activities, as soon as they return home from school. If each child is allotted a hook upon which to hang his outer clothing, much time will be saved in getting ready for school.

A definite place should be assigned for the keeping of mittens, caps, rubbers, and books.

QUESTIONS

1. Explain how clothing can play an important part in the early and systematic training in social habits.
2. List the essential characteristics that must be considered in the selection of suitable clothing for children.
3. What factors determine the amount and types of clothing necessary for any child?

4. Explain why there is such a variation in the clothing needs of children.
5. Make five suggestions that will insure healthful clothing for children.
6. Name the important qualities which fabrics should possess in order to be suitable for children's wear.
7. What effect does unsuitable or unfit clothing have on a child?
8. Describe the factors which control the selection of infants garments.
9. (a) List the garments needed in a baby's layette. (b) Give requirements of each type.
10. List the layette accessories.
11. The cultivation of good taste in children must be uppermost in the mother's thoughts. Suggest ways that will guide and help in this training.
12. Compare set-in sleeves, kimono and raglan, for use in infants' and children's garments.
13. Make a list of the points which determine the beauty of babies' garments.
14. Show the extent to which right clothing can affect the habits of a child.
15. What are the main points to consider in selecting (a) sun suits for children, (b) playsuits for winter use, (c) dresses for girls?
16. Name three methods of setting fullness in children's garments. How do you determine which method to use?
17. Give the important points to keep in mind when constructing children's garments in regard to: (a) seams, (b) edge finishes, (c) decoration.
18. Should pockets be made on children's garments? Give your reasons.
19. How do buttons and buttonholes, snaps, hooks and eyes, and zippers compare for use on children's garments?
20. When would you use the bound buttonhole in preference to the worked buttonhole?
21. Name the decorative stitches most appropriate for children's garments.
22. In determining correct lengths for children's dresses, what points must be kept in mind?
23. How can the clothing of a child be planned so as to (a) develop independence in dressing and (b) orderliness and care for clothing?
24. Explain why it is very important for boys always to appear well groomed.

REFERENCES

- Farmers' Bulletin No. 1778, U. S. Department of Agriculture. Fabrics and Design for Children's Clothes.
Iowa State College, Ames, Iowa. Clothes for Little Folks.
University of California and U. S. Department of Agriculture. Clothing Program. I, II, III, IV.
University of Idaho, College of Agriculture, and U. S. Department of Agriculture. Children's Clothing. Lessons I - II.
Baldt, Laura I. Clothing for Women. J. B. Lippincott Co.
Denny, Grace G. Fabrics (Revised). J. B. Lippincott Co.
Singer Sewing Machine Co. How to Make Children's Clothes.

CHAPTER 13

CONSTRUCTION OF DRESSES, COATS, SUITS, AND OTHER GARMENTS

Construction of a Dress for Formal or Informal Wear

Some of the questions we ought to consider and decide at this time before planning to make a formal dress might be: What does formal dress mean to me? How does it differ in general form or style from the other dresses I have made? Will this type of dress fit in with my needs and be an indispensable part of my wardrobe? Do I need a dress more informal in style for afternoon, or for parties, or for less formal functions—rather than this formal style?

Although costumes change in style, line, color, and fabrics from season to season, there are certain definite standards of good taste that have been established by tradition which must not be overlooked or violated when we select garments that are appropriate for various occasions. What are the rules that may serve as guides for our decisions of what constitutes good taste for us in our selection of dress and accessories for formal and informal affairs?

Selection of Styles Suitable to Type, Occasion, and Fabric.—A formal dress for the young girl is very different in style, color, and fabric from one that would be chosen by the mature woman. A formal afternoon dress for the young girl presents a problem somewhat different in style, color, and fabric from those selected for formal evening wear. An afternoon dress of the informal type for summer would not present the same problems in selection as those found in winter informal dresses. When and where the dress is to be worn has a decided influence on the selection of the style, color, and fabric.

FABRIC.—The formal, or “dress-up” dresses, which are worn occasionally, or on special occasions, do not need to be made of a material as durable as might be required for those worn more often because of the necessity of more frequent cleansing and care.

Fabrics for formal wear may be dainty in texture and weave, or they may be more luxurious in texture. Taffeta, organdy, net, filmy lace, sheer transparent crepes, and satins are suitable fabrics. Although simplicity should be the keynote for the young girl, these clothes may, nevertheless, be colorful and picturesque in style and line.

Colors, if to be worn in the evening, must be selected with extreme caution, because of the effect of artificial light. Why? Study the effect of artificial light on various textures and colors, noting especially the effect on greens, yellows, blue-violets, and blue.

Since softness of effect is desirable in these special dresses, all stitching and finishes should contribute to this effect.

Informal clothing for winter has a wider range in selection of design, color, and texture than the formal dress. While durability is not of the first importance, as in the case of sport clothes, informal clothing must, nevertheless, be more substantial in appearance than that required for formal wear. For summer afternoons—or dresses of the more informal type—the style might be more bouffant, the colors more delicate, and the texture, although sheer and dainty in effect, would not be as luxurious as that used for the winter informal or formal dress.

The construction of a formal or informal dress will give you an opportunity for the selection of a different type of pattern than you have, possibly, used before—one which must be adapted to a sheer, light-weight, and transparent fabric. The characteristic quality of these fabrics will suggest more fullness in the skirt, either by means of shirring, gathers, or tucks. A style should not be selected with many cut-up sections or requiring many seams, for seams show prominently in transparent fabrics.

In selecting a style for formal or informal wear, you must consider its becomingness and try to adapt the prevailing styles, colors, and texture to your physical characteristics and personality. Self-analysis—as worked out in Chapter 1—will aid you to select the most appropriate lines, colors, textures, decorations, and accessories.

TO ACQUIRE TASTE IN SELECTION.—For most of us, the only way to acquire good taste and to become familiar with the best style features is through observation, by going where we can see well-dressed people, noting what one sees, and then analyzing why it is good or poor. Fashion magazines are now available with good colors and fabrics illustrated either on figures or in textile sketches showing weaves and colors combined. Many shops display the new styles, fabrics, and colors in their windows, so window shopping is important. Visits of groups to shops, with talks by the merchandise counsellor, buyer, or assistant buyer, will give many ideas on styles in fabrics and colors. One or more of these helps should be used to crystallize fashion information and aid in selecting styles and fabrics with more discrimination.

Texture.—The fabrics with which you have worked, in the construction of garments so far, have been comparatively easy to manipulate and, with the exception of some rayon fabrics, have not required exceptional care in their handling.

The terms used, when we speak of the fabric we shall want to use in constructing our dresses for formal or special occasions, are sheer, thin, soft or stiff, fine, close weave or open mesh, light in weight, and transparent.

A fabric which you will select now, may possess one or more of these qualities or characteristics, and since these fabrics have such definite characteristics all their own, each will react best to the treatment especially adapted to it.

It is, therefore, important before selecting fabrics of such varying and desirable qualities that we should learn how to handle them in all the steps of construction, and strive to preserve and bring out all the beautiful effects possible.

Economic Factors.—Everyone desires the satisfaction that comes from being well-dressed, a satisfaction that insures one that she is always appropriately clothed for every occasion that may arise. To be able to forget clothes and to save time, money, and energy, one should have her plan for the season's wardrobe with each ensemble carefully thought out, a plan based on a knowledge of needs and style.

The latest fashion news is so available to everyone—our daily newspapers, which feature styles with advice on new fabrics and colors, the department stores, which are becoming very conscious of consumer education, and all women's magazines have much to offer us.

Before selecting a season's wardrobe, this information should be scanned for items which are of special interest in solving our individual problems. What is the new silhouette? How can I adapt it to my figure?

While keeping informed of the newest styles, we must not choose a style or garment just because it strikes our fancy, unless our selection is backed by commonsense and a knowledge of good value.

Do not choose a high or declining style if you must economize. Economy is based not on what one spends, but on the correctness of what one buys. Clothes incorrect in cut and too extreme in cut or unsatisfactory in color, regardless of how attractive their appeal, are always an extravagance. The contrary is true where you have purchased wisely, because then you always feel that you are dressed in good taste, with the resulting freedom from consciousness of clothes that is one of the greatest assets of a well-dressed woman.

Time is also saved by not plunging headlong into the construction of a garment that is beyond your ability, that takes too much time to construct, or that entails too much labor to be worth the effort expended.

Time is saved by a well-organized plan of work; so, from the knowledge gained by your previous work, make a plan of work that you can consistently follow in constructing the dress you choose to make now.

Selection of Fabric.—Study the illustrations and fabrics suggested for each view on your pattern envelope before selecting your fabric, for the effect of any garment depends very largely on selecting a fabric that is suitable for the design, as well as for its special use. The new fabrics are listed and, when buying them, you will find the new colors suited to the season's styles.

If the style calls for a soft, clinging effect, you will use a soft draping fabric and not a crisp silk or organdy which would give a bouffant effect. Avoid using flimsy materials. Wiry fabrics may be tucked and plaited but cannot be gathered or shirred. Velvets, metallics, and heavy laces, which are rich and beautiful in themselves, should be made up in a design simple in cut, in order to bring out all the beauty, texture, or design of the fabric.

Preparation of Fabric—Special Treatment.—Silks and rayons and their treatment before construction were discussed in Chapter 6. There are a few fabrics which should not be dampened and which require careful pressing. Some sheers will lose their newness when dampened; so, for successful use of any of these fabrics, test before you dampen and press. New finishes are being introduced each season, and unless you understand their nature and are familiar with their reaction, or unless the finish is guaranteed, you may lose the qualities for which you selected these fabrics. Some fabrics lose their crispness, others become harsh, and others will wrinkle and shrivel when heat is applied. Metallic tissues, or metal threads in a fabric, may turn color or tarnish if heat is used. Some fabrics will stretch, while others thicken and shrink so much as to be unusable. While we may expect and be assured by labels that fabrics will launder, be color-fast, and non-shrinkable, samples should be tested before purchasing any fabric not guaranteed by a reliable retail store.

If there is any difficulty in identifying the right and wrong sides of the fabric, mark the wrong side with chalk.

Usually wools and silks have the right side folded in.

Some thin silks are printed so well that it is difficult to

determine the right side. The right side is brighter than the wrong side.

If your fabric has a twill, hold fabric up against you in such a way that the twill will extend down toward your right foot.

Selvages are smoother on right side.

Sheers have more finish on right side.

For detailed directions for placing patterns on printed fabrics, diagonal weaves, large floral patterns, stripes and plaids, consult Chapters 5 and 6.

Review of Study of Commercial Pattern.—The operations connected with the study of commercial patterns are reviewed briefly:

1. Write name on pattern envelope.
2. Select design on front of envelope and draw circle around the one you are going to make.
3. Find out and note seam allowance. Memorize it.
4. Study list of materials suggested for style.
5. Find out your bust measure at top of chart—draw line downward to locate amount of material needed for your design.
6. Take pattern out of envelope and write name on each piece.
7. Compare parts of pattern with chart and get acquainted with shapes of pieces of pattern.
8. Study the chart and note: (a) notches, (b) marks indicating the placing on fold of material, (c) other markings. What do they mean?
9. Test pattern.

Testing Pattern.—Consult Chapter 6, *Attractive Clothes*.

Review for Placing Pattern, Pinning, and Cutting Garments.—The instructions for placing and pinning the pattern and for cutting are reviewed here:

1. Straighten one end of your fabric.
2. Study your layout.
3. Smooth out on table fabric folded as your layout shows.

4. Pin pieces of pattern as on layout.
5. Place marks indicating fold on fold of fabric.
6. Grain of fabric—watch this—and place as indicated on pattern pieces.
7. Pin pattern in place on each corner, with pins pointing in same direction down and inside cutting line. If pins are placed diagonally, there will be less danger of displacing material while pinning. As you pin, be sure to smooth material downward.
8. Keep fabric on table; do not lift as you cut. Cut notches outside of line. (Fig. 72, Chapter 6.)
9. Place a basting thread ($\frac{3}{4}$ -inch stitches) on center front, center back, center line of sleeve, and center line of collar. (Fig. 73, Chapter 6.) For basting silks and sheers use sewing silk.


MARKING TUCKS AND SHIRRINGS.—Where shoulder tucks are called for in a pattern, mark them accurately and make them wider at the top than at the bottom. Pull the threads through to the wrong side and fasten them securely with fastening stitch; do not tie them. They may be sewed by hand or machine in the form of tucks, or they may be edge-stitched. When such tucks are made in sheer fabrics, trim to $\frac{1}{4}$ inch of the stitching line and overcast them, or stitch again to prevent fraying.

For shoulder shirrings, mark as indicated on pattern, or if you wish to shirr a plain waist allow the extra fullness on front shoulders. Put in rows of shirring, using a long machine stitch (Chapter 10) keeping the shirring at center shoulder not near armseye or neckline. Put in as many rows of shirring as required by your pattern, or from three to seven rows. The spacing between rows will depend upon fabric. (Fig. 190, Chapter 12.) Pull the thread ends to wrong side, wind them around pins, even the gathers, and fasten threads on wrong side. If the shirring is to be done by hand, use fine thread and put in the number of required rows of fine running stitches; draw up threads, wind around pin, even the gathers, draw threads to back, fasten them, and stay them on the back with

a piece of the same fabric if sheer; if not, use fine net or any sheer fabric. Fit the reinforcing piece so that the strain of wearing will come on the reinforcement and not on shirring.

Suggestions to Aid in Cutting, Pinning, Basting Sheers or Thin Silks.—It is necessary to be more cautious when cutting sheers because of the slipping and stretching tendency of the fabric. Most sheers can be cut more accurately and successfully if they are pinned to a thin paper before cutting. If a thin, easily torn paper is used, it may be left on the fabric while pinning, basting, and stitching seams in some very sheer fabrics.

It is especially important to keep paper underneath all sheer fabrics when staying bias edges, such as neckline, armseye, and shoulders.

Use plenty of dressmaker pins with sharp points and as short as can be managed. No. 5 is a satisfactory size. Place all pins at right angles to sewing lines, or with some fabrics the diagonal placing of pins will prevent the slipping of fabrics. At important points two pins crossed  will aid in placing and keeping the pattern more firmly on the fabric. Keep paper, fabric, and pattern flat on table when pinning, cutting, and basting. If a seam comes out uneven at the ends, do not cut off—test with your pattern, repin, and in repinning pat and smooth the more bias seam on to the less bias seam before rebasting.

A thin strip of paper may be used on long seams if it has not been possible to cut out your dress on paper.

TO PREVENT STRETCHING SEAMS.—If you do not use paper as a device for keeping the fabrics from stretching on seams, it will be wise to test seams by placing the pattern on each seam before stitching. Very often in cutting sheers, especially where the edges are bias, they may have been stretched out of shape. Testing seams with the pattern may help to prevent difficulties if this is done before stitching. Stretched seams can only be remedied by repinning, and rebasting care-

fully, for if you stitch the seams regardless of this stretching tendency, you will have difficulty and probably a ruined dress.

Stitching on Different Types of Fabrics.—Fabrics vary so in their handling and stretching qualities that it is important, especially with sheers, to be sure that the needle and thread is right in size and number and that the tension is adjusted to the weight of fabric you are stitching. Test on a sample of your fabric before stitching your seams.

Fabrics with raised figures or embroidered fabrics require careful watching to see that the seams remain in position when the presser foot passes over the raised figures. Careful, slow stitching will also prevent broken needles when passing over the stiff, raised figures.

Stiff fabrics, such as organdy and coarse cotton laces which have been stiffened, keep their shape and stitch easily, while crepe de Chine, soft silks, nets, chiffons, and fine laces slip and stretch while underneath the presser foot. Some of the very fine fabrics, such as nets, filmy laces, fine voiles, with a texture so light in weight that the feed cannot pass them under the presser foot, will need to be stitched with a lightweight paper to add the necessary firmness. Do not use newspaper on light-colored fabrics and be sure, by testing, that any paper you use can be easily removed without injury to fabric.

Satins, especially the very soft rayon satins, require very careful basting to prevent slipping and puckering of seams. Satins retain the impression of a stitched seam, so that extra care must be taken in testing the stitching, for marks of stitching and pressing cannot be removed from these fabrics as easily as from other fabrics where water and steam can be applied.

When ready to take out your bastings, clip them every 2 inches. Pulling long bastings from sheer fabrics is liable to tear or leave a bad mark. After staying the curved and bias edges around neckline, armseye, shoulder-lines, and placket openings with machine stitching, place the pattern on and see if the seams fit and have kept their shape. All trans-

parent seams must be finished neatly, for they show through. Make practice seams on samples of your fabric to discover the best method for your fabric.

To prepare garments for first and second fitting, consult Chapter 6.

A method of inserting sleeves is discussed in Chapter 6 and elsewhere in this chapter.

To hang skirt and lay hem at bottom of a skirt or dress, consult Chapter 6 and also later in this chapter.

To fit garments, follow outline in Chapter 6.

Making and attaching collars is discussed later in this chapter.

Cuffs and wrist finishes are given elsewhere in this chapter (pages 452-454).

For plackets, hemmed, consult Chapter 12.

Continuous bound plackets set in a slash or in a seam are described in Chapter 6.

For the use of zippers, consult Chapter 6.

Fastenings, hooks and eyes, snaps, loops, and bound buttonholes for firm fabrics are given in Chapter 6.

For worked buttonholes, consult Chapter 12.

For patch pockets, see Chapter 12.

Seams for Sheer Fabrics.—The seams given here are those which are commonly used on sheer fabrics.

TURNED-IN OR FALSE FRENCH SEAM.—This seam is satisfactory for thin silks or sheer fabrics. Make a plain seam on wrong side of fabric. Turn the edges even to within $\frac{3}{8}$ inch or less from stitching (depending upon fabric). Test on sample of your fabric. Turn the two edges of seam in toward each other. Stitch close to edge by machine or by hand with a running stitch for a softer finish. (Fig. 178, Chapter 12.)

PLAIN STITCHED SEAM.—Stitch as for a plain seam, press seam edges together, and stitch again $\frac{1}{4}$ inch from stitched seam through both seam edges. Trim off close to stitching. If a plain seam is used and the fabric is not too sheer, the edges may be overcast.

ROLLED SEAM.—This seam may be used on sheer materials where a narrow joining is required. (Fig. 194.) Baste or stitch the seam edges together and trim all ravelings. Begin at the right and roll the two edges together and whip them with a close stitch. This is a suitable seam for sheer fabrics that are not to be laundered.

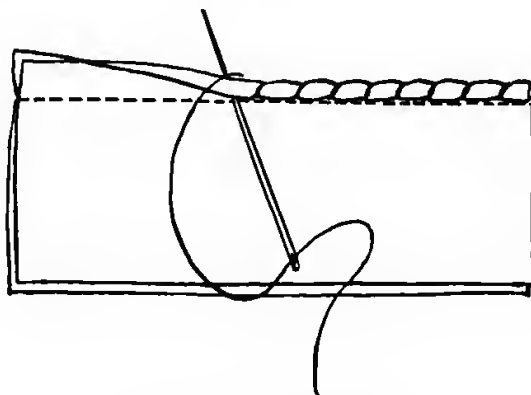


FIG. 194. Rolled Seam

HEMSTITCHED SEAM.—This can be used where there is no strain. Turn under on edge of seam as in Fig. 195 and place seam line. Have it hemstitched and trim edge of seam on wrong side.

PICOT SEAM.—Baste the seam as for plain seam and have it hemstitched on seam line. Cut close to inner line as at *b* (Fig. 196) where there is no strain. If strength is required, cut at *a*.

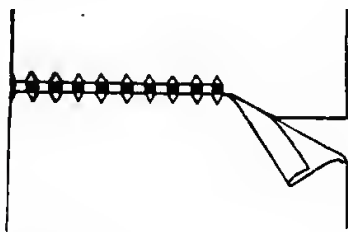


FIG. 195. Hemstitched Seam

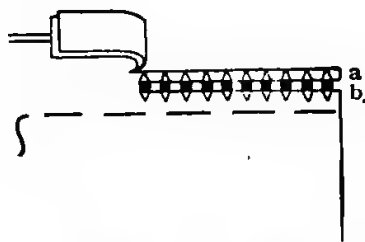


FIG. 196. Picot Seam

PLAIN SEAM WITH EDGES BOUND.—This may be used where seams are liable to be seen. Press the seam open if it is to be open and bind each edge, or press flat if edges are to be bound

together. Use a thin taffeta seam binding. Fold the binding with one edge projecting $\frac{1}{16}$ inch beyond the other. Slip the binding over the edge with the wider edge underneath, and while sewing with the running stitch, hold the binding a little easy on the seam to avoid drawing the edge. (Fig. 87d, Chapter 6.)

Hems for Sheer Fabrics.—In measuring hem on sheer fabrics use a gauge, for accuracy is required. Inaccuracies will be more apparent on sheer fabrics than on firm fabrics.

To make the hem, turn under $\frac{1}{8}$ to $\frac{1}{4}$ inch, depending upon firmness of fabric. If it ravel easily, $\frac{1}{4}$ inch is necessary, but never more. In sheer fabrics, it may be necessary to baste the first fold, especially if a wide hem is required. (Fig. 197.) Narrow hems may be creased and folded without basting, but wide hems must be basted accurately.

Hold the material with the hem basted in place, fasten the thread, draw the thread through, and tuck the end under the fold of hem.

Take a stitch to secure the thread and continue hemming. Hold the hem over the first two fingers of the left hand, the fold of the hem extending up and down and to the right. Keep the stitches even, taking small stitches through the cloth and into the edge of the fold. (Fig. 198.)

Blind hemming is used on silk and sheers when it is necessary to have the stitch invisible on the right side. Proceed the same as in hemming, except take up only one thread of the fabric (showing on right side). On the wrong side use a long slanting stitch. (Fig. 199.)

Slip-stitching is used where an invisible stitch is desired on both right and wrong sides of garment. It is not a strong stitch but is useful in finishing silk and sheer hems. If a small loop stitch is taken in every six stitches, the hem will not rip so readily. (Fig. 200.)

Running stitch hems are used on infants' fine garments and on sheer fabrics in place of the hemming stitch. (Fig. 201.) They make a dainty finish.

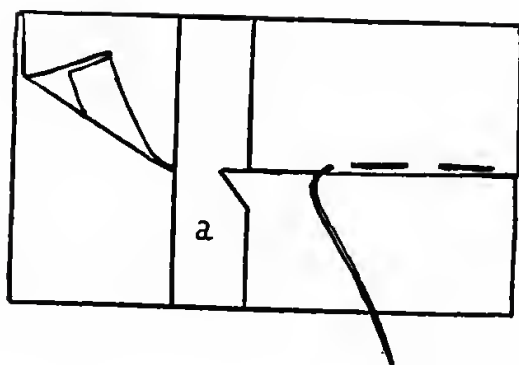


FIG. 197. Hem Turned
a, gauge; *b*, basting
 started

FIG. 198. Even Hem—Wide

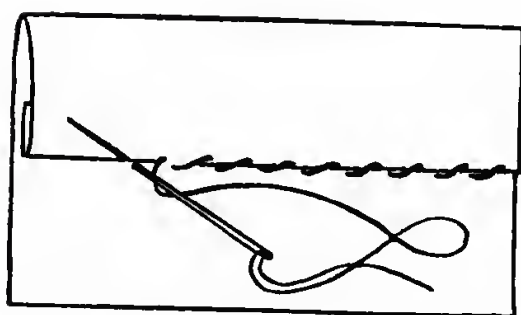
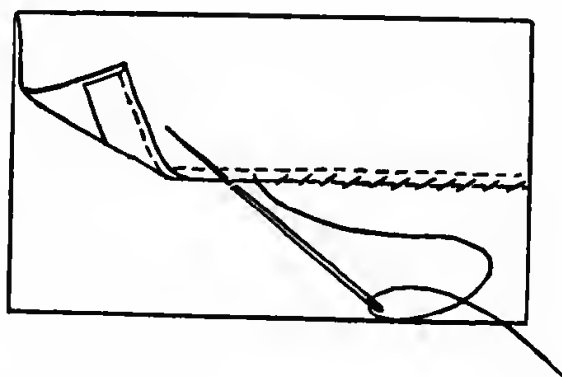
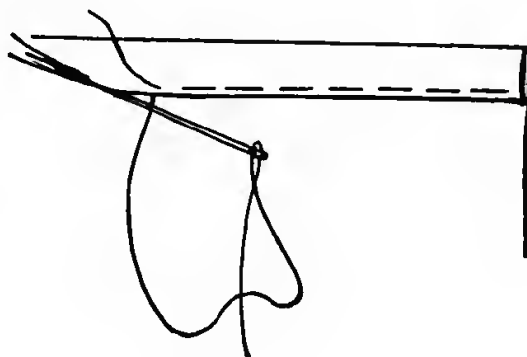


FIG. 199. Blind Hemming

FIG. 200. Slip-Stitched Hem



ROLLED.—Rolled hems may be used on sheer fabrics where it is desirable to have a hand finish. It is not adapted to curved edges. (Fig. 202, wrong side.) Keep roll round; do no flatten.

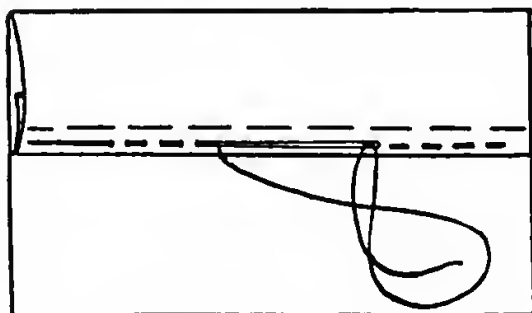


FIG. 201. Running Stitch

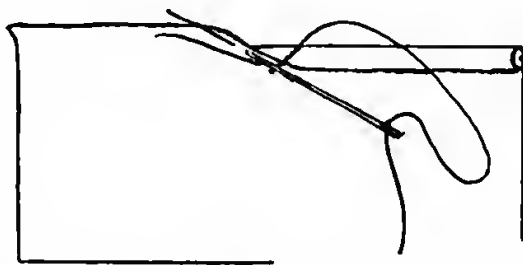


FIG. 202. Rolled Hem

If the edge is picot-stitched, or if a row of machine stitching is placed close to the edge with a fine cotton, it will aid in rolling and it will be more durable. To make the roll, hold the material with the wrong side up, start the roll at the right-hand corner, hold the material taut between the fingers of both hands, and roll the edge toward you. Unroll and roll the edge until you secure a small tight roll with the edge completely enclosed. Keep the rolled hem taut while taking up two threads of fabric, then slip needle inside fold (as in slip-hemming). The rolled hem may be used for a dainty finish on handkerchiefs, collars, baby dresses, under garments, and all sheer fabrics. It is especially appropriate for circular hems.

Pin hems are $\frac{1}{16}$ to $\frac{1}{8}$ inch in width. Make both turnings of the hem as narrow as possible. Hem without basting.

Plackets for Neck Openings.—There are various plackets which can be used for openings at the neck of garments.

BOUND BUTTONHOLE PLACKET FOR NECK OPENING.—Follow these directions:

1. Cut a piece of same material or contrasting fabric about $2\frac{1}{2}$ inches wide and 1 inch longer than the length that the finished opening is to be.

2. Fold lengthwise and crease, or run a basting thread along lengthwise center thread.

3. Place a basting thread on center fold of garment the length of finished opening.

4. Place the center of binding piece on center basting thread on garment, right sides together, and baste along center line.

5. Stitch $\frac{3}{16}$ inch on either side of basting, following basting line exactly. At bottom of basting, stitch straight across, turning square corners and up on other side of basting.

6. Cut along center line on basting to within $\frac{1}{4}$ inch of the end of stitching, then cut diagonally into each corner. Press seams open for clean-cut edge. (Page 181.)

7. Turn binding through to wrong side. Fold so that folded edges of binding meet in center of slash.

8. Crease on line of stitching at the end of slash, keeping square corners. Fold binding piece to wrong side, forming an inverted box plait on back below slash.

9. Turn under free edges of binding, turn to lengthwise stitching on wrong side of garment.

10. Stitch the three-cornered piece from wrong side at bottom of slash with the inverted plaits. The stitching across the lower part of the placket should not show on right side. (Fig. 93, Chapter 6.)

NOTE: Cut a piece of fabric $2\frac{1}{2}$ inches wide the length of placket opening. Hold in center lengthwise. Attach at back to left side of opening. This will provide a space on which to place the sockets of snaps. The balls will be placed on bound placket opening. Snaps may be used where there is little or no strain.

FRONT PLACKET WITH EXTENSION CLOSING.—This type of placket may be made as follows:

1. Cut a piece of fabric $2\frac{1}{2}$ inches wide and 1 inch longer than finished placket is to be.
2. Place the center of facing on the center front of garment with right sides together.
3. Stitch $\frac{1}{2}$ inch to the left down the length of the placket. Turn square corner, stitch across $\frac{3}{16}$ of an inch and up, following first line of stitches.
4. Cut at center lengthwise thread to within $\frac{1}{4}$ inch of bottom of slash. Clip to corners and turn seams on edges. Turn the three-cornered piece at bottom to wrong side.
5. For extension, cut lengthwise strip about $2\frac{1}{2}$ inches wide lengthwise of fabric. Fold along center lengthwise. Stitch across end. Turn.
6. Slip extension into opening, pin in place, baste, and stitch in place. Center thread of extension must coincide with center line of garment. (Fig. 203.)

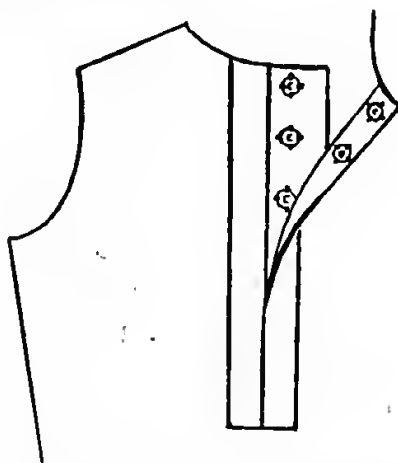


FIG. 203. Extension Opening

ZIPPER PLACKET FOR OPENING WITHOUT SEAM.—For an opening without a seam, prepare the zipper placket as noted:

1. Face and prepare placket opening the width and length of the metal on zipper.
2. Place zipper under opening with metal of zipper extending length of opening. Pin and baste in place. Open zipper 1 inch. Stitch to this point. With needle down, raise presser foot. Close zipper, lower presser foot, and continue stitching. (Fig. 110, Chapter 6.)

The use of a corder foot will allow the stitching to be placed nearer edge of fold.

ZIPPER PLACKET FOR SIDE CLOSING WITH SEAM.—A zipper placket for a side closing with seam may be prepared as follows:

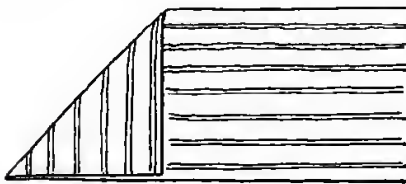
1. Stitch seam. Close placket by basting on seam allowance. Press seam and placket opening. Pin and baste zipper on wrong side, center of zipper over stitching of seam. Catch-stitch to hold zipper in place.

2. Open zipper 1 inch and stitch to this point. With needle down, raise presser foot, close zipper, lower presser foot, and continue stitching $\frac{1}{2}$ inch below zipper, then across and up on opposite side of zipper. (Fig. 106, Chapter 6.)

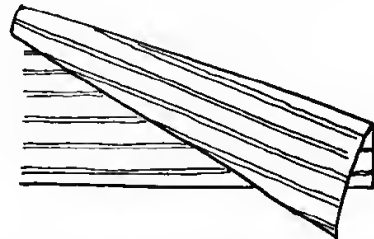
Discussion of Bias Edges.—There are two kinds of bias—

1. A *garment bias* is often used in dress seams.
2. A *true bias* is the diagonal of a square. It is a cut which divides the warp and filling threads equally and it is used for bindings, facings, and bands, or whenever there is a curved line to be finished. It is also used for other decorative trimmings.

The “bias” of the fabric is the diagonal line formed when the filling thread is folded over on the warp thread. If folded on a perfect square so that the warp threads are parallel to the filling threads, the resulting fold from corner to corner is a true bias. It stretches easily and is very valuable for finishing curves. The long bias is used in millinery, and it should not be substituted for true bias in dressmaking because there is not enough stretch in it for finishing curves. (Fig. 204.)



a. True bias



b. Long or garment bias

FIG. 204. Bias Edges

PREPARATION FOR CUTTING BIAS STRIPS.—Straighten one end of the material from the selvage, then lay the warp threads parallel with the filling threads. (Fig. 205a.) The diagonal fold is bias, and cutting will give a bias edge.

To mark the material for cutting, use pins, tailors' chalk, or a pencil and mark the desired width at right angles from the bias fold. Mark all strips before cutting the first strip.

Pin the material firmly. In marking and cutting, accuracy is important. The fabric may be pinned on paper for cutting. This will help in cutting and avoid stretching.

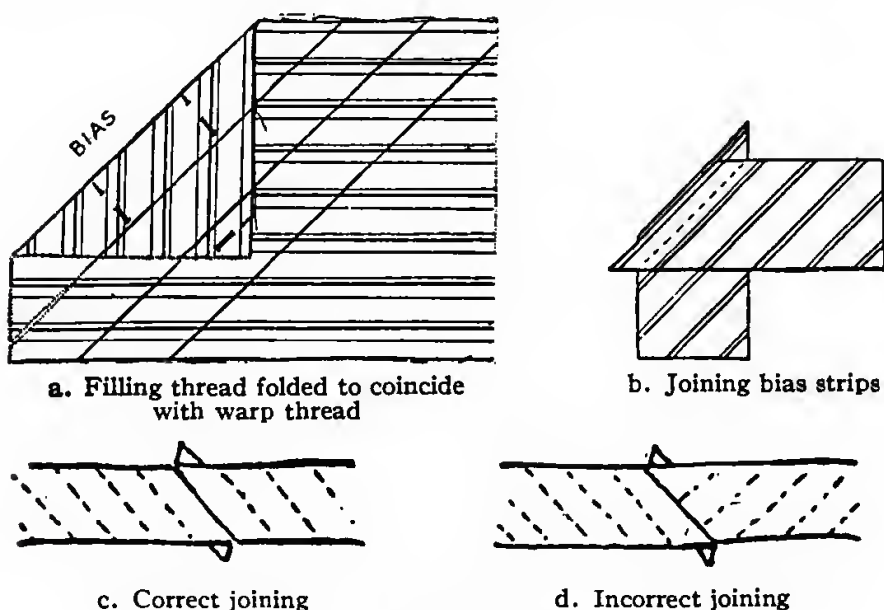


FIG. 205. Bias Strips

In piecing or joining bias strips, always match grains, as well as designs. (Fig. 205b.) The width of a bias strip means the distance between the cut edges. In buying material on the bias, the length of the selvage is measured. One must buy therefore about one-third more than the desired width of the bias strip; for instance, 12.6 must be bought if a 9-inch bias strip is used. With 36-inch cloth, the bias is 56.7 inches.

RULES FOR JOINING BIAS STRIPS.—Bias strips should be joined on the thread of the goods. Filling thread must join filling thread and warp thread should join warp thread.

Extend the end of one strip beyond the other—the depth of the seam.

Stitch seam from point where strips touch. The extending points are cut off after stitching. Press seams open.

CUTTING CONTINUOUS BIAS STRIPS.—If you need to cut long strips of binding, time is saved by cutting a bias strip wide enough to seam and cut in one piece. Prepare the bias as usual. From the wide strip, mark off as many strips as needed, as illustrated in Fig. 206a-b. Stitch the selvage edges together, planning it so that *a* coincides with *a'*, *b* with *b'*,

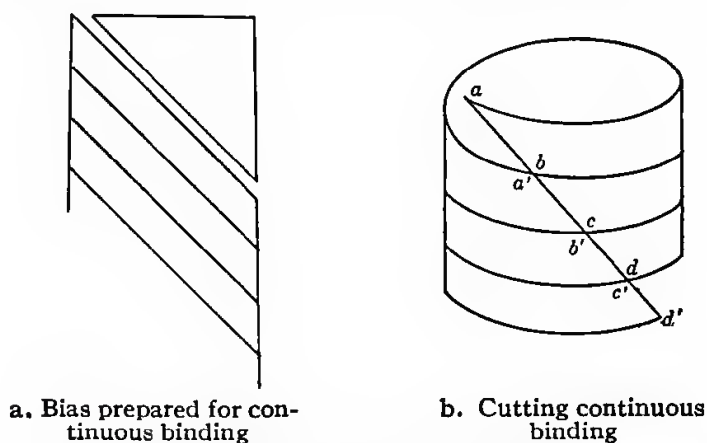


FIG. 206. Continuous Bias Strips

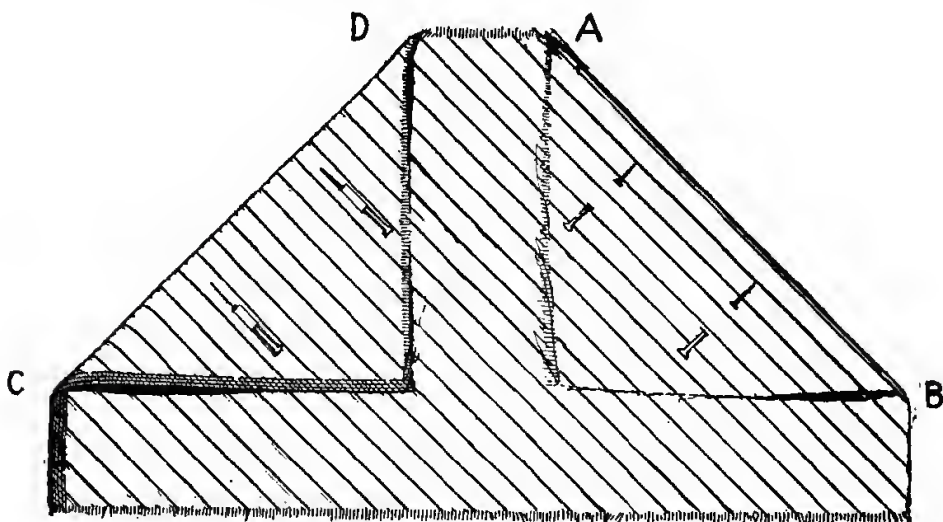


FIG. 207. Cutting Bias on Twill Material. *A-B*, incorrect cutting. *C-D*, correct cutting

c with *c'*, *d* with *d'*, *e* with *e'*, etc. Baste, stitch, and trim off the selvage edges. Turn both seams. Press them open. Begin cutting at *a* and continue cutting on the lines until the end is reached. This gives a long piece of bias with seams correctly joined. In joining twills, be sure that they go in same direction. (Fig. 207.)

Finishes for Collarless Necklines.—The neckline may be cut any desired shape. It should be adapted to the type of dress, with consideration for the shape of the face and the neck. (Chapter 1.) The shapes most in vogue at times are square, round, U-shape, V-shape, boat, and cowl neck.

TYPES OF FINISHES FOR NECKLINES.—The types of finishes for edges are varied: binding, bias facings, shaped facing, rolled and whipped hems. Ruchings, lace, plaited ribbon, rickrack braid or plain and fancy braids may be used. Whatever method of finishing is used, the result must be a flat, smooth finish.

Facings.—Facings are used to finish edges and may be applied to the right or wrong side of garments. They show on one side of the garment only. They may be made of same fabric as garment or of a fabric contrasting in texture or color.

Facings are used as a finish for the edges of parts of garments such as collars, cuffs, necklines, bottom of skirts, etc. There are four varieties of facing, each of which has its appropriate place:

1. *Straight Facing* is used on any straight edge. The only requirement is that the grain of facing matches the grain of the garment to which it is applied.
2. *A Bias Facing* may be used on straight or curved edges. It can be shaped and stretched to fit the curve. (Fig. 208.)
3. *A Shaped or Fitted Facing* is cut the same shape and on the same grain of the material as the part to be faced. (Fig. 209.)
4. *An Exceptional Facing* is a bias facing. The place to which it is applied, for example the armseye, has the

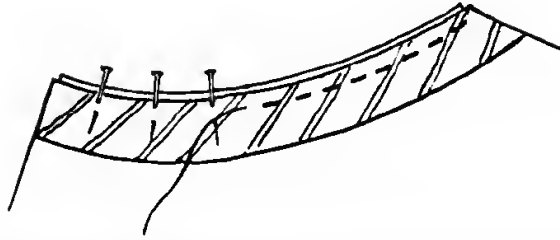
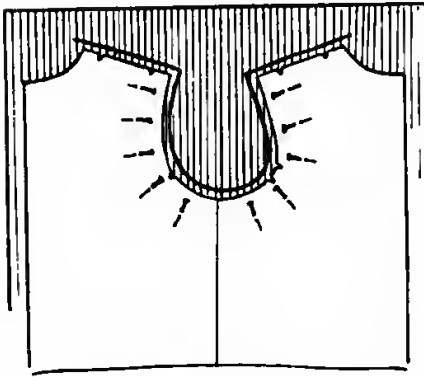
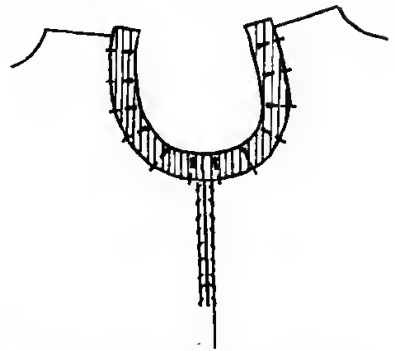


FIG. 208. Binding Pinned and Basted before Stitching



a. Armscye on material to be cut

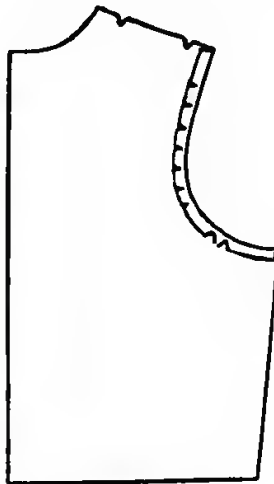


b. Facing cut and pinned on wrong side for finishing

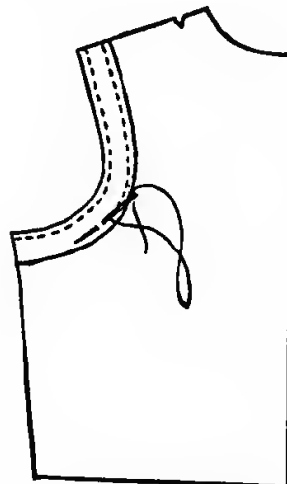
FIG. 209. Shaped or Fitted Facing for Armscye



a. Bias facing prepared



b. Armscye with turned edge



c. Facing applied on wrong side

FIG. 210. Exceptional Facing

edge turned on seam allowance. Clip curves and baste firmly. Turn the edges of bias facing $\frac{1}{4}$ inch to wrong side on both edges, baste. Pin in place on armseye $\frac{1}{16}$ inch inside of folded armseye edge, then baste on both edges evenly—first on outer edge, then on inner edge, stitch for stitch. This allows for easing on the inner edge and stretching on the outer edge. Especially good for armseye curve without sleeves. (Fig. 210.)

THE WIDTH OF A BIAS FACING FOR A NECKLINE.—This depends upon fabric and the amount of curve on the neckline, for in cutting, allowance must be made for stretching around curve.

TO CUT.—Cut a gauge with an allowance for width of finished facing plus two seams, the width depending upon fraying of material.

Fold material for true bias, mark bias with pins or tailor's chalk, join bias with wide seams, press seams open, and trim to narrow seams.

DIRECTION FOR APPLYING ALL KINDS OF FACINGS.—In pinning strip to garment, place the beginning end 1 inch back of right shoulder seam, right side of bias to right side of garment, edges meeting. Pin around neckline with pins at right angles, stretching as necessary to secure a smooth, flat edge. Baste, remove pins, and stitch. Care must be taken to see that joinings of bias strips do not come in same place as the garment seams.

CLIP EDGES.—Press for clean-cut edge. If seams are trimmed to $\frac{1}{4}$ inch, a sharper edge will result. Turn facing to the wrong side of garment with the stitching on edge. The seam edge must not show from right side. If close basting stitches are used and care in placing seam is exercised, the result will repay the extra work necessary.

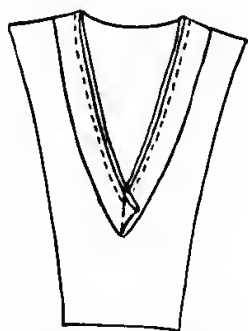
Turn under the free edge of facing so that facing is of uniform width, stretch to shape, baste to garment, keeping it smooth and flat.

Press and hem or slip-stitch the fold to garment.

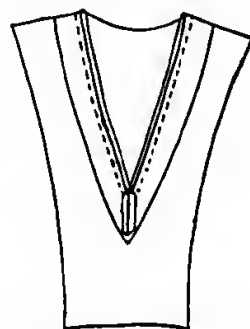
If the bias is finished on right side of garment, apply the bias to wrong side with right side facing wrong side. Pin, baste, stitch, press seams, and clip. Turn under free edge of bias, stretching bias to lie smoothly, baste fold to garment, press, and stitch or use decorative stitch for finishing.

All bias strips, bindings, or facings should be pieced on a thread of goods at finishing ends. If this is planned for before stitching to garment, it can be managed easily.

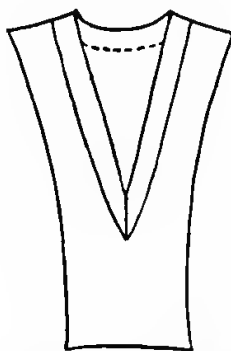
BIAS FACING FOR A V NECKLINE.—In facing a V neck with a bias facing be sure, as you pin facing in place, to allow enough of the bias strip to make a true miter at the point. Pin and baste the miter, remove facing from neckline, stitch miter, clip away surplus material, leaving seam allowance, press seam open. Put prepared facing back on neckline, pin, baste, and stitch in place. Stitch around point. Clip the



a. Bias facing basted



b. Mitered bias facing ready to turn



c. Right side finished

FIG. 211. Bias Facing for a V-Shaped Neckline

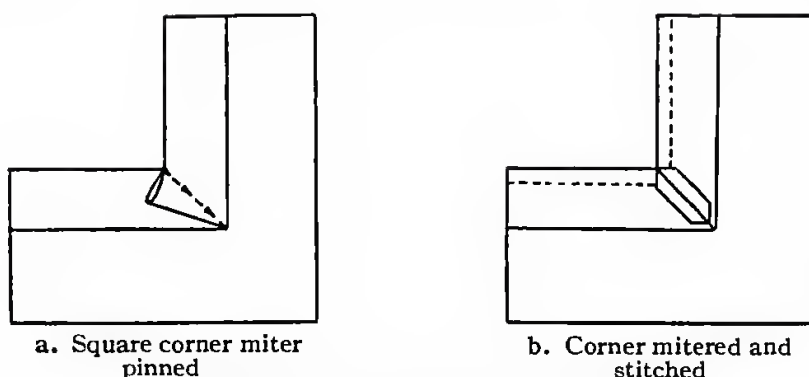


FIG. 212. Bias Facing for a Square Neckline

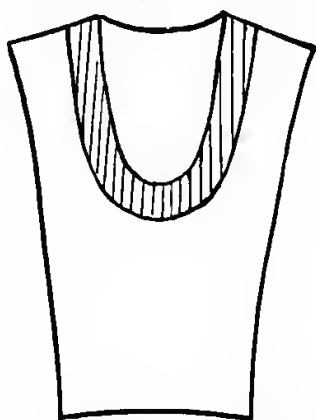


FIG. 213. Shaped Facing on U-Shaped Neckline

point of neck edge, so that facing can be turned to wrong side. Turn facing to the wrong side, with seam on edge, press, and baste close to edge. Turn under the free edge of facing and hem or slip-stitch in place. Press well. (Fig. 211.)

A BIAS FACING FOR A SQUARE CORNER.—Place a bias strip right side down on right side of square, beginning at one corner. Leave about $1\frac{1}{2}$ inches free at corner. Pin around neckline, turning corners squarely. Do not stretch facing at corner where starting miter. Pin and baste all mitered corners. Remove facing, stitch mitered corners, and trim leaving seam $\frac{1}{4}$ inch. Press seams open. Replace facing and pin, baste, and stitch around neckline. Clip corners to stitching. Turn facing and finish as in V-shaped neckline. (Fig. 212.)

For U shape, a binding or shaped facing is more satisfactory. The bias facing may be applied satisfactorily if it is

curved before applying, by shrinking out fullness on inner curve and stretching on outer curve, making it fit the deep curve. (Fig. 213.)

TO APPLY SHAPED FACING ON WRONG SIDE OF GARMENT.—Follow same procedure as for facing to be applied to right side. Usually this facing is cut about 2 inches wide, following the outline of neckline. Grain lines must match, and the piecing must come on shoulders so that a straight grain can be used on center front and center back. To finish free edge of facing on wrong side, turn under, baste, and stitch $\frac{1}{8}$ inch from edge. Do not attach to garment unless necessary. If required, slip-stitch with long stitches, or attach at convenient points so that no stitching will show on right side. If well pressed, the facing should not need attaching. A shaped facing may be used on a square, V-shaped, U-shaped, cowl neckline and bateau neckline, and also where there is a slash cut on the front or back of a garment.

It requires more material, but fitted facings insure a smoother and more accurate finish. If the corners are puckered when turning, it is because the corners were not clipped close enough to the stitching.

Bindings for Edge Finishes.—Bindings are used as finishes for edges of fabrics. They prevent fraying, give a neat finish, and are decorative in effect. The same fabric may be used, or a fabric of contrasting texture or color may be applied.

A binding shows on both sides, even in width, and it may be cut on the straight or bias of fabric. Straight bindings are generally used on straight edges. Bias bindings are usually applied to curved edges.

Width of bindings may vary from $\frac{1}{8}$ inch to wide extension binding for adding length to garments.

Both bindings and facings may be applied to be finished on the right side by machine stitching, or on the wrong side for hemming by hand. They may also be finished by decorative stitches (Chapter 12). The finished effect required determines whether the binding shall be applied from the right or wrong

side. For nice finishing as used on silk, rayon, or wool, lines of stitching should not be allowed to show. Therefore, these should be applied from the right side by stitching, and then hemmed or slip-stitched by hand on the wrong side.

When bindings are to be stitched by machine on right side for cotton fabrics, or finished with decorative stitches for children's garments, they are applied by stitching on the wrong side; they are then turned to the right side for final stitching or decorative finish.

Whenever you add a finish, such as bindings, pipings, or facings, remember to cut away the seam allowance which was provided for finishing, for the binding or piping will take its place.

PREPARATION OF BIAS STRIPS FOR BINDING NECKLINES.—Prepare a gauge for the width of bias to be cut, allowing 2 seams' width, for non-fraying fabrics $\frac{1}{4}$ inch, plus finished width of binding or facing— $\frac{1}{4}$ inch width of binding or facing. To cut, mark fabric strip the width of prepared gauge, place pins 2 inches apart, crease between pins, cut strips, and piece together.

A BIAS BINDING FOR A SQUARE OR V NECKLINE.—Cut a true bias strip as wide as required for the finished facing, plus allowance for two seams. Begin 1 inch back of shoulder seam, leaving 1 inch beyond neckline for safe measurement.

Pin bias around the neckline, right side of strip to right side of garment, raw edges matching, place pins close together, 1 to $1\frac{1}{2}$ inches apart. At corner, fold the binding into a dart, or small miter, to fit the square or V shape when turning the corner or point. Fold binding lengthwise and turn to wrong side, fold free edge under. At corners on wrong side, fold a small dart or miter as on right side. Hem or slip-stitch at line of stitching. (Fig. 212.)

In facing or binding a V or square neckline corners or points must be slashed as close to the stitching as possible without cutting the stitching. If necessary, buttonhole around the cut, or slash to prevent fraying. In bias bindings and facings, if the corners are puckered when turning, it is because the bias strip was not mitered sufficiently.

SINGLE BIAS BINDING.—Pin and baste binding on right side before stitching, slip-stitch or hem on wrong side. (Fig. 214.)

When binding a curved neckline with a bias strip if the neck is a concave curve, stretch the edge of the strip when pinning, basting and stitching, stretching where the curve is deepest so

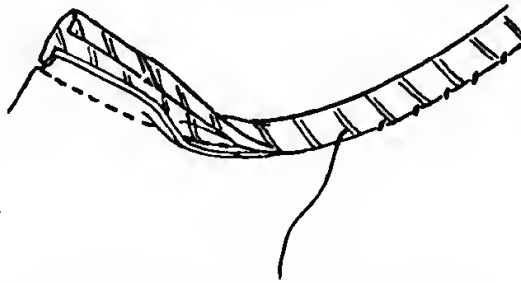


FIG. 214. Single Bias Binding

that it will rest smoothly around the neckline. Clip to within a few threads of the stitching. Turn the free edge of binding, stretching as you fold so that the fold rests smoothly on the line of stitching. Baste and hem or slip-stitch on the line of stitches. The stitches must not show on right side. Make the stitches loose enough so that they will not draw around curve.

DOUBLE BINDING.—This type of binding is sometimes used where the fabric is sheer, or where it is desirable to give a soft roll effect. To estimate the cutting width of bias strip for a double binding, allow four times the width, plus two narrow seams. This binding is most attractive if very narrow, $\frac{1}{8}$ inch finished.

In piecing bias, allow wide seams, in order more easily to press seams open and then trim to narrow seams.

Fold binding in half lengthwise and baste the edges together to keep them even. Place the right side of double binding to right side of garment with its edges even with edge of garment, baste the three edges together. Stitch. If the edge of garment is curved, clip the edge before turning the binding. Turn the fold of the binding to wrong side, baste fold in place over stitching, then hem or slip-stitch the fold to garment. This method does away with turning in raw edges and is especially adapted to sheers. (Fig. 215.)

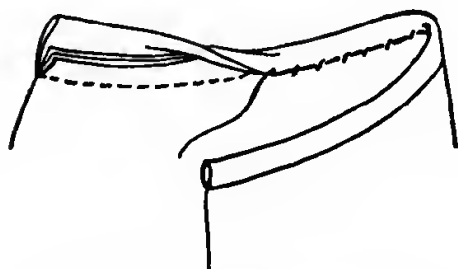
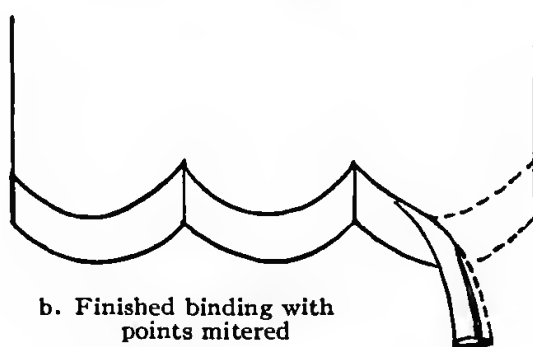


FIG. 215. Double Bias Binding

FOR WOOLEN FABRICS.—Another method of finishing which is more suitable for woollen fabrics is as follows. Turn under the free edge of binding, baste, and stitch close to the edge, free from garment. Turn the binding over the neckline, keeping same width around neckline. On wrong side it should extend beyond line of stitching. Stretch folded edge to lie flat against garment, baste securely. If it is to be finished by machine, stitch from right side in the seam line. Or it may be finished by a line of running stitches with an occasional back stitch taken directly in seam line. This type of binding may also be finished on wrong side by slip-stitching to garment, keeping the stitches loose as they must not show or draw around curve.



a. Right side with binding mitered at points



b. Finished binding with points mitered

FIG. 216. Binding Scallops

BINDING SCALLOPS.—Hold bias next to you and baste right side of binding to right side of scallop. Ease the binding over the outside edge and stretch it at the joining of the scallops. Fold on inner points. The same principle holds good in binding the neck of a dress—stretch the bias. In facing the neck of a dress, ease the bias. (Fig. 216.)

Piping.—Piping may be either straight or bias, used as a facing placed between seams. Or piping of the same or contrasting color or fabric may be used to decorate garments. If

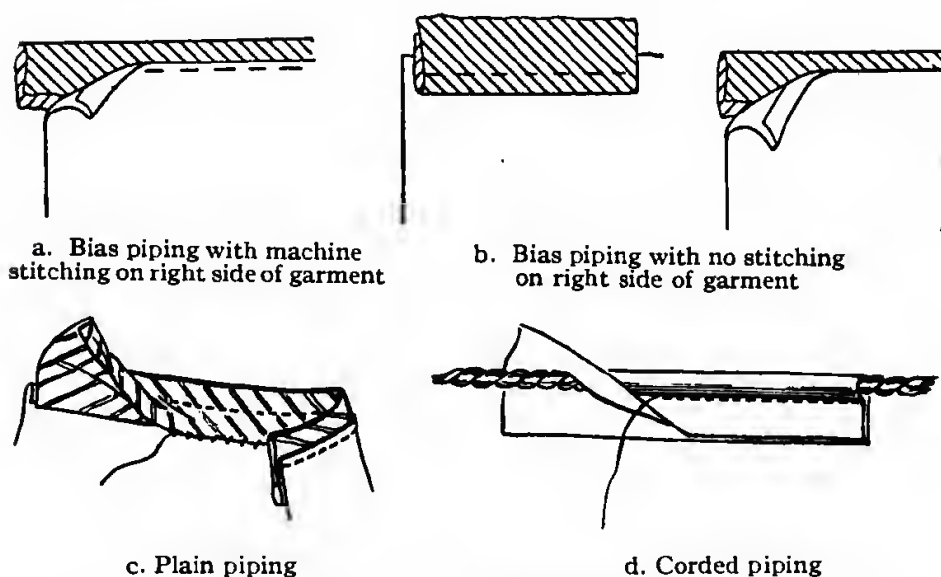


FIG. 217. Piping Used as Facing

the fabric to be used for piping is firm, cut the bias strips $1\frac{1}{4}$ inches wide. If the fabric is loose in weave, cut $1\frac{1}{2}$ inches wide. Fold the bias strip lengthwise, baste edges together. Turn under the garment edge to be piped on seam allowance. Baste the piping on wrong side with a narrow fold extending beyond fold of garment and showing on right side. Keep it even throughout. Edge-stitch from right side of garment. Overcast edges of piping on wrong side. This is especially suitable for children's garments.

Piping to be used in place of a facing may be sewed on in the same way. Cut the bias strip a little wider and fold, so that one edge of it is the width of the seam. This is the

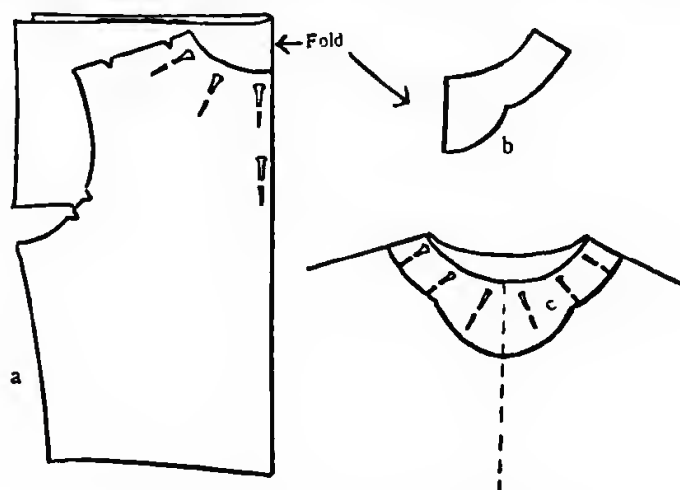
edge held next to the garment when stitching it on. The wider edge should be twice as wide. The free edge may be turned under and stitched by machine or run by hand. A long slip-stitch or blind hemming will hold it in place.

CORDED PIPING.—Encase the cord in the bias strip and baste. Place between two layers of fabric, right sides of fabrics facing piping. Baste the four edges together. Stitch close to edge using cording foot.

CORDED PIPING AND FACING IN ONE.—Enclose cord in bias strip and proceed as in plain piping with facing. (Fig. 217d.)

For Decoration or Finishing on Right Side of Garment.—With a planned design, use a shaped or fitted facing. For a neckline this facing must be cut exactly the same shape as the neckline. The facing must be cut on same grain of fabric as the garment. Do not make a mistake and match a cross grain with a straight lengthwise grain, for, in laundering, the grains will shrink unevenly and they cannot be pressed smooth and flat.

In cutting the facing, place the center front of the garment on a fold exactly as though cutting the entire garment, but be



a, fabric in place for cutting shaped facing;
b, shaped facing for neckline; *c*, facing applied ready for stitching

FIG. 218. Cutting and Pinning Shaped Facing

sure that enough of the fabric extends under the pattern to cut shaped facing the chosen design. Pin securely and cut around edges. Mark shoulder seams and the outside shape of facing with tailor's chalk. (Fig. 218a.)

Cut, allowing seams on edge of design. Place the back pattern on a fold of fabric and plan the back section in same way as front was planned. To construct, pin, baste, stitch, press open seams of both shoulders of garment and facing. (Fig. 218.)

Place right side of facing to wrong side of garment, edges and shoulder seams matching, pin and baste neckline edge, clip curves or points, press seams for clean-cut edge, turn facing to right side, seam on edge, baste $\frac{1}{8}$ inch from edge, and press facing in place. Turn under edge of facing design, baste in position, and edge-stitch around design. If a decorative finish is desired, use a decorative stitch. (*Attractive Clothes*, pages 391-400.)

COWL NECK.—The cowl neck's finish requires a weight. These are of lead and they are covered with fabric matching the garment. Make a little bag the size of the weight. Slip

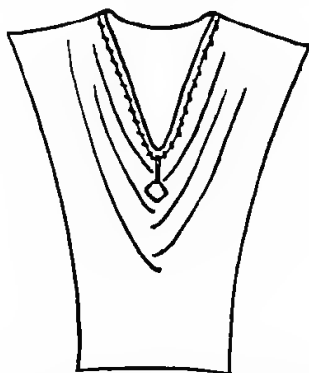


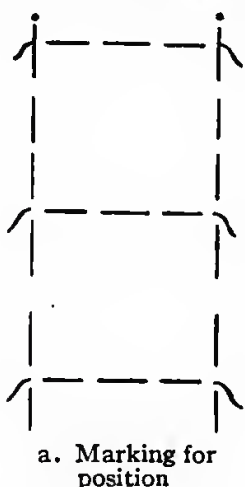
FIG. 219. Cowl Neck with Weight

the weight into the bag. Sew opening and attach one corner of weighted bag to center of hem of neckline. If necessary to attach the folds of the cowl neck to the weight, make the bag long enough so that the folds can be tacked to the bag. (Fig. 219.)

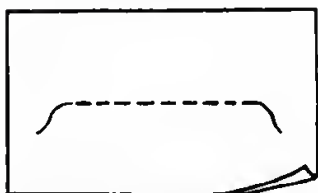
One-Piece Buttonhole for Sheer Fabrics.—For sheer fabrics, such as organdy or chiffon, construct one-piece buttonholes in the following manner:

1. Mark placing of buttonholes with a row of running stitches.

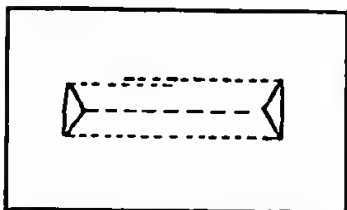
2. Cut a strip of material for binding on the straight lengthwise grain of fabric $1\frac{5}{8}$ inches wide and $\frac{1}{4}$ to $\frac{1}{2}$ inch (depending on fabric) longer than the length of finished buttonhole. At each end, fold $\frac{1}{8}$ to $\frac{1}{4}$ inch (depending on fraying of fabric) to wrong side, crease.



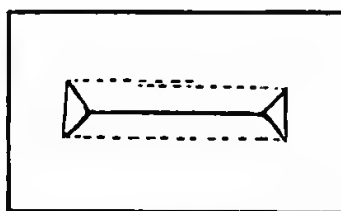
a. Marking for position



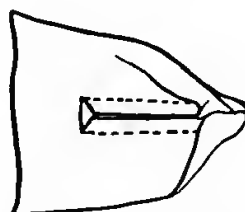
b. Baste binding in place



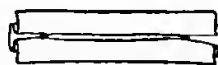
c. Start at center to stitch.
Stitch on edge of fold at end



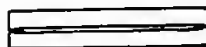
d. Cut on heavy line to stitching on fold



e. Turn binding to wrong side



f. Catch folds together at ends



g. Finished buttonhole

FIG. 220. Sheer Fabric Bound Buttonhole

3. Place right side of facing to right side of garment. With the center lengthwise thread of binding exactly on the line for the buttonhole, baste binding securely in place.

4. Stitch $\frac{1}{8}$ inch from basted center line, and across each end exactly on the folded edge of facing.

5. Cut on center line directly to the stitching at each end.

6. Turn facing to wrong side. Turn under free edges of facing and hem to machine stitching. Press. (Fig. 220.)

Side Seam Placket for a Dress of Firm Fabrics.—When a dress fits closely around the waist it is necessary, in order to put the dress on and off over the shoulders, to provide an opening extending above and below the waistline. The length of opening depends upon the closeness of fit at waistline. It is usually $2\frac{1}{2}$ to 4 inches above waistline and 4 to 7 inches below waistline. Seam the waist and skirt, leaving the required opening. Join the waist and skirt. The convenient slide fastener can be put in so that the actual fastener does not show. Put a basting stitch on accurate seam line. Stitch a piece of bias fabric like dress, 2 inches longer than opening and $1\frac{1}{4}$ to $1\frac{1}{2}$ inches wide, to front seam edge, turn, and baste. Turn under one-half of seam allowance on left or back edge; baste and stitch this edge to the tape of the fastener close to metal. Close the placket opening, and pin in place as it is to lie when finished. Turn garment to wrong side; pin and baste free edge of tape to free edge of front binding, close to metal of fastener. Line the fastener on back with a folded strip of fabric. Stitch as in Fig. 106, Chapter 6.

Side Seam Placket Suitable for Sheer Fabrics.—For a side closing with snaps, place basting line on accurate seam allowance. Sew bias facing to front just outside seam basting. Sew bias extension strip to back edge just outside basting line. Basting must just show on each edge when the placket is completed. Turn under edge of extension, baste in place, and hem on line of stitching. Turn under edge of facing, baste, and slip-stitch in place. Sew a hook and eye at waistline to take strain from snaps. (Fig. 105, Chapter 6.)

For other plackets consult Chapters 6 and 12 and elsewhere in this chapter.

Trimming Suggestions for Tailored Informal and Formal Dresses.—Contrasting materials and textures are used in various ways. Collars, cuffs, and belts can be made of a contrasting color or fabric. The color contrasts vary with the season. Buttons, clasps, and belt buckles of various mediums (metal, glass, bone, or wood), shapes, and sizes can be purchased to match. Buttons and belt buckles may be made of fabric. If the dress is made of a printed fabric, a color to match one of the colors or the foundation color may be used. If the fabric itself is used, plan so that the same part of design comes on top of each button and buckle.

FAGOTING.—Fagoting is used to join two finished edges. Collars and cuffs are often made by joining bands of lace, or insertion, narrow braid, or bias folds. For curved designs, bias bands are more satisfactory. There is a cord on the edge of lace which aids in drawing lace up to conform to shape. The bands or lace are basted on paper, following the shape desired with the necessary space between. The herringbone stitch is worked from one edge of the banding to the other edge. Fagoting may also be worked between narrow hems or turned-in seams. (Fig. 221a.)

To Make Stitch. Alternating stitches are taken from left to right. The needle is brought from under the edge of the left-hand strip diagonally up through the edge of the right-hand strip. Keep the stitches spaced evenly, with the needle passing under thread. Remove the paper when all stitching is completed.

Ladder Fagoting. In straight bar or ladder fagoting, start from left, bring the needle up from the wrong side, carry it straight across to the other side, and put it down in the edge of the right band. Pass the thread around the foundation thread two or three times, depending upon the width of spacing between strips. After completing the bar, slip the needle in the strip to make the next bar. Keep the thread winding in the same direction on each bar. (Fig. 221b.)

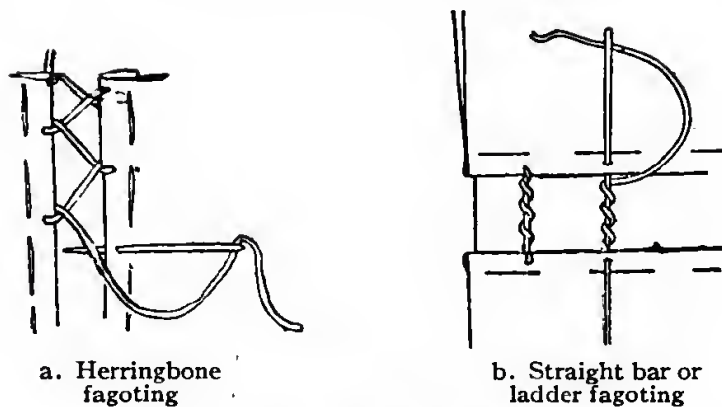


FIG. 221. Fagoting

FABRIC TRIM.—Materials used to trim a printed dress should match the prominent color in the design.

BRAID.—Braids fancy or plain are often used to trim informal or tailored ensembles. Plain braid may be used to bind edge, buttonholes, and patch or set-in pockets. Fancy



FIG. 222. Braiding by Hand—Soutache Braid Sewed Flat

braid may outline edges. Soutache braid may be applied on designs, either by applying the braid flat and sewing it firmly with tiny running stitches with an occasional backstitch, or if applied standing on edge, catch edge invisibly with small hemming stitch. (Fig. 222.) Braid may be attached by machine as suggested in Chapter 10.

COUCHING.—Couching is used to cover seams and hems, and to outline simple designs. Usually a heavy embroidery cotton, or a fine cord, is attached to the fabric by a finer embroidery thread either of the same color or a contrasting color.

To Couch. Draw the foundation thread through the fabric, or push the end through to the wrong side at the beginning

of a design. Then lay it along the design. The stitching thread catches the heavy thread or cord in place by a straight



FIG. 223. Straight or Slanting Couching

or slanting stitch as in Fig. 223. Several strands of wool, for couching on a wool dress, may be caught in place by a finer strand.

RUSSIAN INTERLACED STITCH.—Work a row of herringbone stitches, size of stitch adapted to placing. The interlacing stitch of a contrasting thread interlaces inside the herringbone stitch as in Fig. 224. The interlacing stitch holds the herringbone stitch firmly in place.

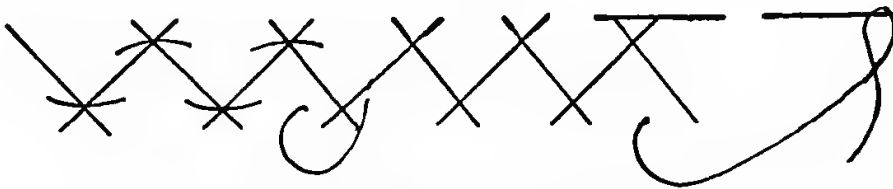


FIG. 224. Russian Interlaced Stitches

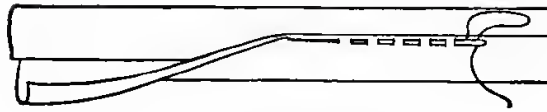
MISCELLANEOUS.—There are a great number of odd trimmings of various sorts which can be used. Some of these are listed here.

Bound Buttonholes of same or contrasting fabrics make an attractive trimming by introducing spots of color.

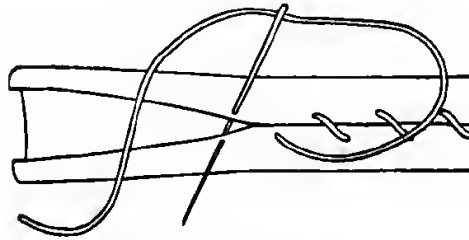
Ties and Scarfs of contrasting color and fabric may be made of various shapes and sizes. They may be fastened or draped at neckline or shoulders, or they may hang straight down the front of a dress.

Collars, Cuffs, and Vests can be made of appropriate and interesting textures, or the same fabric may be tucked, shirred, corded, or fagoted.

Bias Bands, Millinery and French Folds may be made of same material and stitched or hand applied as bands on collars, cuffs, yokes, or around skirt. (Fig. 225.)



a. French fold



b. Milliner's fold

FIG. 225. Folds Applied as Bands

Tube Trimming in loops, frogs, or fancy shapes, fringes, or bows may be made as described in Chapter 10. The sewing machine may be used to make effective trimmings. Tucks, shirrings, bands, bindings, and trim-stitch are all suitable and quickly made. Chapter 10 will give many suggestive ways of using machine attachments.

Flowers, Rosettes, and Bows can be made of sheer fabrics, such as net or organdy. Ribbon or thin silks fold into shape easily, and they can be hand-rolled and made into attractive shapes. Tailored and fancy bows of single or double fabric may be made of the dress fabric. If of single fabric, the edges may be picoted, rolled-hemmed, or whipped, or the edges may be fringed. (Fig. 226.)

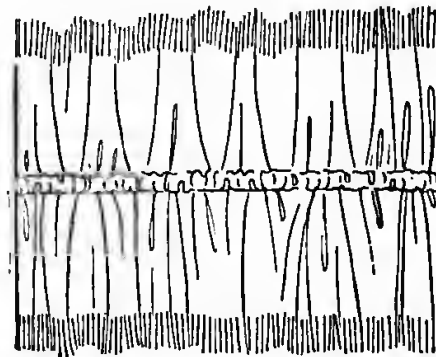


FIG. 226. Shirred Trimming with Fringe Edges

Decorative Stitches may be applied. Some of those given in Chapter 12 and in Chapter 6 of *Attractive Clothes* will be appropriate for sheer fabrics.

For Snail Shirrings cut a narrow bias strip of fabric, turn a fold on each edge so that the raw edges lie $\frac{1}{8}$ inch along center. Run a gathering thread zigzag across from folded edge to folded edge drawing up the thread as you gather. (Fig. 227.)



FIG. 227. Snail Shirring

To Appliqué Lace. Baste lace to the fabric and whip the edges with short over-and-over stitches (satin stitches). Cut the fabric to within $\frac{1}{8}$ inch on wrong side. Overcast, turning edge in with needle as you overcast. This will resemble rolling and whipping. Straight edges may have a rolled or whipped hem, but curves must be overcast. Appliqué designs from fabrics, embroidered designs, or sheer fabrics stamped with a design may be applied to collars, cuffs, or to other parts of garments. Different methods of applying are in use as determined by fashion. The appliqué motives, whether stamped or cut out, are placed over a corresponding outline on the garment. The edges are usually turned in and then basted flat to fabric. Press carefully after basting to insure its being flat and smooth. It may then be outlined with



FIG. 228. Appliqué of Lace

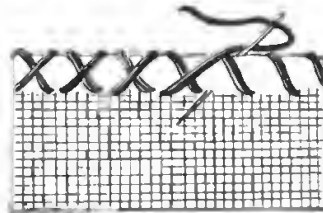


FIG. 229. Cross-Stitch on Hem

short, evenly spaced, loop stitches or the edge may be fastened with fine hemming stitches. (Fig. 228.)

Quilting is in vogue at various times and it may be employed either on a design or a border; or the entire section of garments, such as collars, cuffs, vests, may be quilted. This is done by a fine running stitch worked from the wrong side, or it may be machine-stitched. Two parallel lines of stitching may be placed $\frac{1}{8}$ inch apart and a soft yarn may be run between the rows of stitching. This gives a very attractive raised effect for outlining a design.

Double Overcasting. This is an attractive finish for the edges of children's dresses and for blouses. Turn a narrow hem and baste it. Fasten the thread at the right end and overcast the edge, making the stitches deep enough to reach beyond the fold of the hem. Then work back, inserting the needle at the base of each stitch in the previous row so that the stitches cross at the edge. To make a cross-stitch on the hem, put the needle halfway between the stitches when you are reversing stitch. (Fig. 229.)

The Blanket Stitch can be used to make an attractive seam finish. Turn the seam back on the marked seam line and use the even alternating or graduated blanket stitch.

For Connecting Seams. Baste the seams on paper with the blanket stitches almost touching. Connect with fagoting, catch-stitch, or feather stitch. This may be worked on a heavy wool fabric with wool yarn of same or contrasting color.

Construction of Coats and Suits

A Simple Unlined Suit.—A tailored or semi-tailored unlined suit or coat, like other garments, must be adapted to the season, appropriate in line, design, and color to the individual who is to wear it, and be suitable for the purpose or occasion for which it is needed.

Before selecting the style for a coat or suit determine your needs, and then visit shops where you can see the new garments and note styles, fabrics, colors, and details of finishes.

Study fashion magazines, window-shop, and observe what is being worn before selecting your pattern.

Do you need a coat or suit for school or sport? If so, that will decide the type of pattern and fabric which must be selected. Patterns for sports would be more unconventional in style, semi- or loose-fitting, with raglan or loose-fitting, set-in sleeves. Fabrics such as woolens, tweeds, flannels or novelty fabrics are suitable.

Dressmaker suits are made on softer lines, without the severe finish required for tailored or semi-tailored suits. The smooth textures found in taffeta, silks, crepes, soft twilled wools, and softer grades of linen will work up well and give the soft effects required for the dressmaker types.

A tailored coat or suit can be made as easily as a dress, for the steps in construction are practically the same whether applied to a school dress, an afternoon dress, or a tailored suit. More accurate marking and basting, with straighter stitching and more careful pressing, will be required throughout the construction of a suit.

Preparation for Making Suit.—There are various operations involved in the construction of a simple, unlined suit.

BUYING THE PATTERN.—Take accurate measures and buy the same size pattern as for a dress, for the pattern makers have planned and adapted sizes to all bust measures. Do not buy pattern by age.

PURCHASING YOUR FABRIC.—When buying fabric, be guided by the advice given on the pattern envelope, for the selections suggested there were given by experts who know the pattern and the fabrics adapted to it.

PREPARATION OF FABRIC BEFORE PLACING OF PATTERN.—For pressing, shrinking, and straightening of ends of fabric, refer to Chapter 6.

TEST WOOL FOR SHRINKAGE.—The better quality of wool has usually been pre-shrunk when purchased, and unless very loosely woven can usually be made up without further shrink-

ing. If uncertain about shrinkage, place the iron on a corner of the fabric just as you would in shrinking the entire piece. If the print of the iron is left with crinkled edge, the entire piece will need sponging and shrinking. If the fabric has not been shrunk, the following procedure must be followed. Wet a sheet or piece of muslin as wide as the fabric but only one-half the length. Spread the sheet or muslin out lengthwise. Fold the fabric right side out. Smooth out any wrinkles and place it on the wet sheet. If muslin is used, place the folded fabric on the table with the muslin on top, then fold the remainder of fabric back over the wet muslin. Be sure there are no wrinkles in fabric. Roll the wet sheet or muslin and the fabric together tightly and smoothly so that they will not wrinkle. Cover them well with an extra cloth, or newspapers, so that the moisture will penetrate the fabric and not evaporate overnight. In the morning, unroll the fabric and press it on the wrong side as you unroll it. Press out the crease of the fold along the center of double-folded fabrics, and make a new, more accurate, fold along a thread of the fabric. All creases and wrinkles must be pressed out. In pressing, raise the iron slightly; do not push it along the cloth, for it is apt to stretch the cloth. For wool, have a woolen cover on the ironing board. If there is danger of the material acquiring a shine during the pressing, place a woolen cloth on it before pressing the cloth. A tailor will press it for a nominal sum. You may not have the right equipment at home.

TESTING OF PATTERN.—Consult Chapters 5 and 6.

ADAPTATION OF COMMERCIAL PATTERN.—Detailed directions are given in Chapter 5.

PLACING OF PATTERN ON FABRIC.—Study your pattern guide and review Chapter 5.

For an unlined coat make wider seam allowance than for a lined coat. Cut accurately. Before removing pattern from fabric, place basting lines on center front, center back, and grain line of sleeve. Mark seam line by tailor tacks, and tailor tack placing of buttonholes, pockets, plaits, darts, etc.

METHODS OF TRACING SEAM ALLOWANCE.—In suit making, the results depend a great deal upon following accurate sewing lines. Therefore, mark all seams accurately on the sewing line with tailor's tacks (Fig. 74, Chapter 6) or you may use dressmaker's basting, a long stitch and two short stitches. Baste the entire seam with loose dressmaking stitches. Pull the stitching of the seams apart so that you can see the threads between the two layers of cloth as in tailor tacking (at least $\frac{1}{4}$ inch). Clip the threads, then clip the loose threads on top. This will leave short ends on each side. Use darning cotton or soft basting cotton. It will stay in place better than a finished cotton. Adjust length of stitches to fabric.

If the seams are not marked by perforations, turn back seam allowance on pattern, trace around pattern with tailor's chalk, and mark by tailor's tacks or dressmaker's basting.

If there are perforations, mark these with tailor's chalk and connect these marks on fabric by straight lines, using ruler and tailor's chalk. Then use tailor's tacks or dressmaker's basting to mark both sides alike.

TO MAKE DARTS.—Pin the darts before basting, beginning at points, with the bias edge on top, matching marks exactly. Baste on tailor's tacks. Stitch from wide end to narrow on a straight line. If the fabric is heavy and non-fraying, trim to $\frac{3}{8}$ inch seam, and press open. If fabric frays or is light-weight, press both edges to one side. If the dart extends to neckline, open and press seam as the revers will cover the unfinished edges.

Steps in Construction.—An outline of the construction process follows:

1. Stay all bias edges, shoulder, neckline, armscye, and placket opening.

2. Pin, baste and stitch darts.

3. Make bound buttonholes, and baste facing on front edges.

4. Decide upon the kind of seams you will use. For an unlined coat, the bound seams will give a neater finish.

5. Pin and baste on shoulder and underarm seam lines accu-

rately. Keep fabric flat on table throughout all construction. Never rest it on lap.

6. Pin and baste seams of sleeve.

7. Pin and baste lapel facing, if called for. Lapel facings are cut and applied like any other facing, right sides together. Stitch and trim seams, clip corners, press seams open for clean-cut edge. Turn facing to wrong side, baste edge and press again after turning.

8. It should not be necessary to make any changes on front; this section should be completely finished before first fitting.

Sleeves for Coats and Suits.—The two-piece sleeve and the raglan sleeve are the ones commonly used in coats or suits.

For setting in the raglan sleeve, refer to Chapter 6.

The *Two-Piece Sleeve* is new to you. It consists of an upper arm and an underarm section.

Place the underarm section on top of the upper arm, with inside seams coordinating and right sides together.

Pin the inside seam together. It should be kept flat on table. Begin at top, ends even, then pin at bottom with ends even, notches matching, and pin between notches.

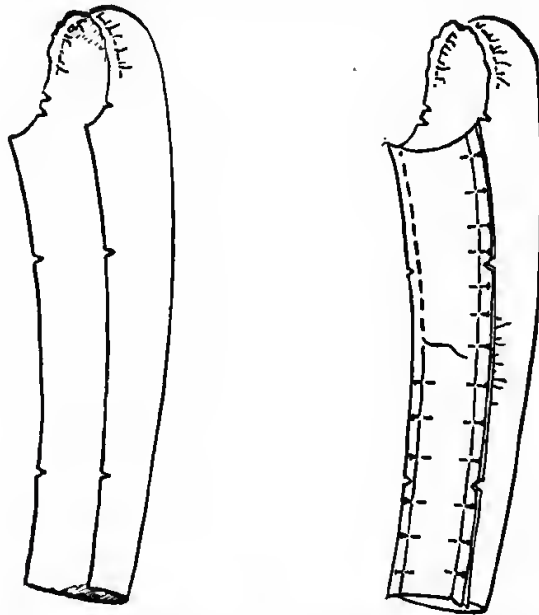


FIG. 230. Two-Piece Sleeve Pinned and Basted

Bring back seam of the upper section over to meet the under section. Begin at top, ends together, and pin to upper pair of notches (as one-piece sleeve). Then pin at bottom, ends matching, and pin to lower pair of notches. The fullness which is necessary for the elbow may be taken in by darts, tucks, or gathers. If the latter, most of the fullness may be shrunk out.

Baste on seam lines, beginning at top. Keep flat on table. Sleeve should lie perfectly flat. If it twists, repin and rebaste. (Fig. 230.) Try on sleeve. If it is too large, fit at outside seam; be careful not to change line direction in either sleeve.

Baste, making alterations.

Seams for Coats and Suits.—In planning the seam width for woolen fabrics, an unusually large allowance must be made, because of the weight or thickness of the fabric, and because these fabrics sometimes ravel freely, thus requiring wider seams for more careful finishing.

OVERCAST AND FINISHED SEAMS.—Seam finishings illustrated on page 238 of *Attractive Clothes*, such as overcast and finished seams, are also used on woolen fabrics. The selections of seams and finishes in Fig. 231a are all satisfactory and appropriate for woolen fabrics.

BOUND SEAM.—Where seams may show, as in an unlined coat or wrap, each seam is pressed open and bound separately with seam binding or bias binding matching fabric and color. (Fig. 231b.)

EDGE-STITCHED SEAM.—Turn under on the seam allowance on one edge and apply to the seam allowance on other edge, and stitch on the right side close to the edge. The edge-stitcher of a machine may be used, or the seams basted together. Turn on the right side, baste flat, and stitch on the edge. (Figs. 231c-d.) If the presser foot is placed half on the seam and half on the fabric, the resulting stitch will be correctly placed directly on the edge, and a good line of stitching is assured, even by girls who are not expert stitchers. Finish by pinking or overcasting. (Fig. 231c.)

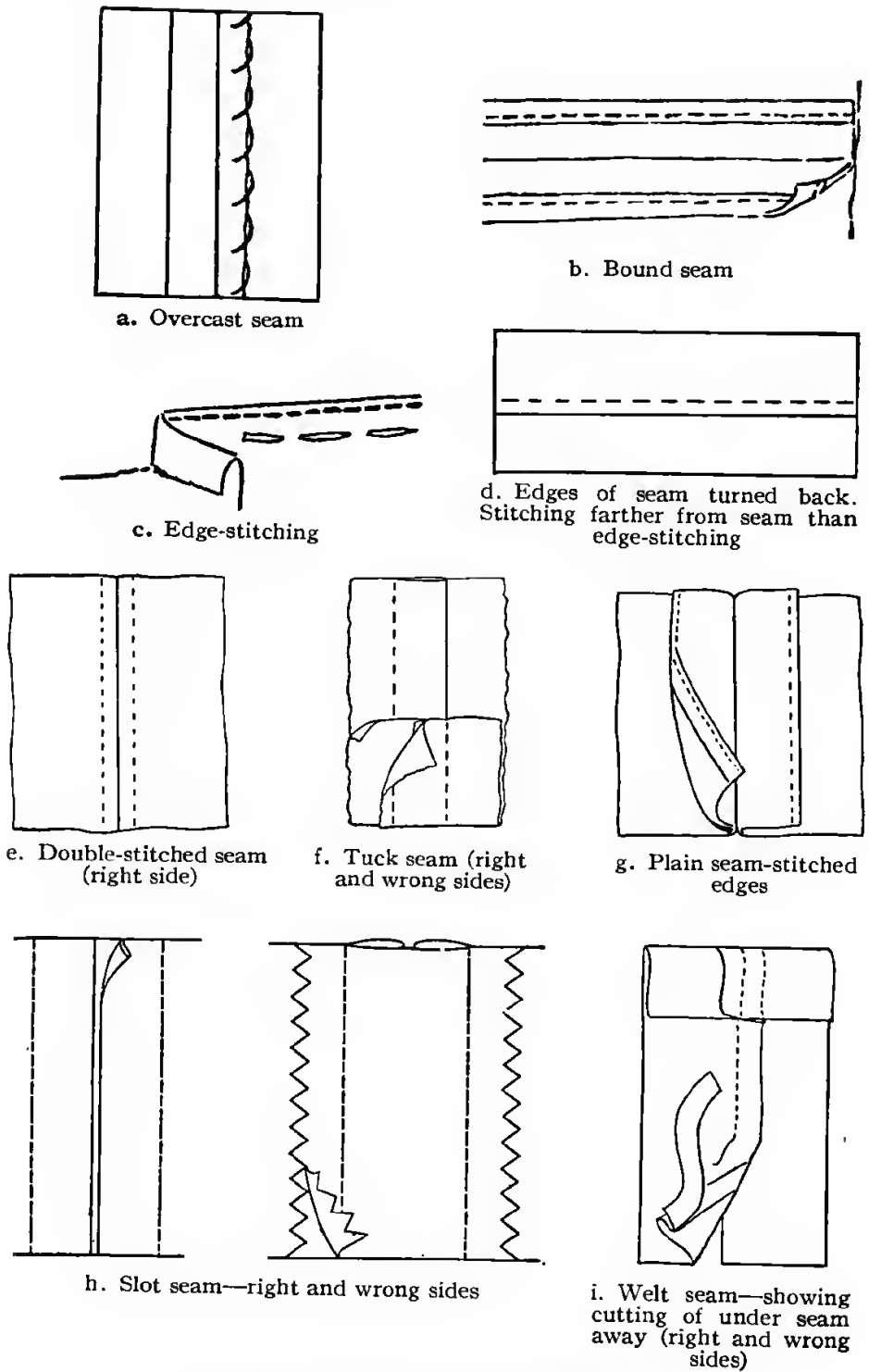


FIG. 231. Seams for Woolen Fabrics

For a plain seam with both edges turned to one side, stitch about $\frac{1}{8}$ inch from the crease of the seam on the right side. Finish by pinking or overcasting. (Fig. 231d.)

DOUBLE-STITCHED SEAM.—Open the seam, baste on both sides of the seam to hold it in place, and stitch from right side $\frac{1}{8}$ inch from the crease of the seam on each side. Finish the edges by pinking, overcasting, or as turned-back edges. (Fig. 231e.)

TUCK SEAM.—Fold one edge on the seam line, lay the folded edge on the seam line of the other piece. Pin, baste, and stitch the desired width of the tuck. (Fig. 231f.)

PLAIN SEAM.—A plain seam pressed open is very satisfactory for thin woolen fabrics and for silk seams. The edges of the seams are turned under and either machine-stitched or run by hand near the folded edge, separate from the garment. (Fig. 231g.)

SLOT SEAM.—The edges of both seams are folded on the seam line. A lengthwise or crosswise strip is placed underneath. The tucks may be stitched any width, or the seam basted together, opened, and pressed. Place a lengthwise or crosswise strip (the width of the opened edges of the seam) underneath, then stitch tucks the width of the seam. Remove the basting from the seam. (Fig. 231h.)

WELT SEAM.—The welt seam is made by stitching a plain seam. Trim off one edge of the seam about $\frac{1}{4}$ inch. Press and baste the seam with the wider edge on top. Stitch parallel to the line of basting, keeping the seam flat. Finish the seam by pinking or overcasting. (Fig. 231i.)

Fitting Coat.—You will now wish to try on the coat.

FIRST FITTING.—Observe the rules given in Chapter 6 for fitting a dress. Check the fit of coat at following points:

1. Ease of fit. It must be full enough to hang naturally and look comfortable.

2. Shoulder seams. Do the shoulders slant correctly for you, and fit smoothly?

3. Width across the shoulders. Does it fit smoothly with an easy fit around armseye?

4. Are the darts in correct position? Usually they extend to the neckline in a coat where they are covered by the lapel.

5. Does armseye fit easily in front, back, and under arm?

6. Is the underarm in correct position?

7. Check the fit around neckline. Any fullness may be taken out by tucks or darts, as illustrated in Chapter 6.

8. Slip on sleeve for checking. Pin at armseye. Do the seams lie in correct position? Does the sleeve look comfortable, with no wrinkles or twisting?

9. Measure for length of coat. Mark hemline as for a dress. The length must be becoming to the one who will wear coat or suit.

10. Check for placing of fastenings if not already made.

11. Locate placing of pockets if any are required.

Make alterations and rebaste for second fitting. Baste sleeves in position.

SECOND FITTING.—Check carefully where alterations have been made. Be sure the coat fits and hangs correctly. Make any alterations and changes as necessary. Stitch seams. Interfacings which are used for reinforcement need not be used unless the fabric and style of coat demand it.

Part Lining.—An unlined coat sometimes has a lining extending from facing to armseye in front to about 2 inches in depth under arm. The back is lined to same depth. If the material is loose in weave and liable to stretch, this part lining is a wise precaution to take.

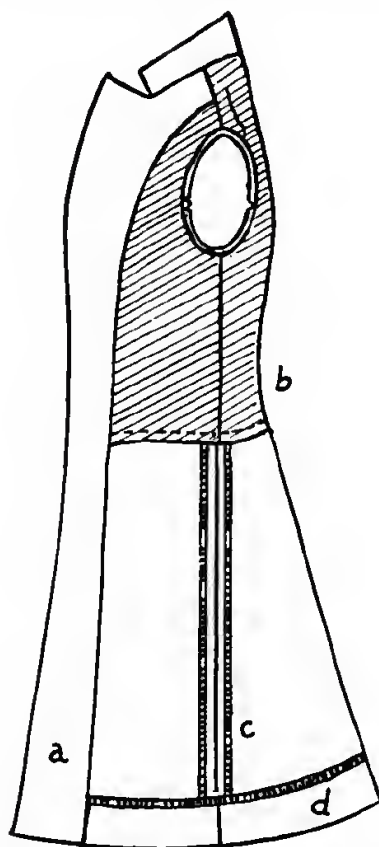
A tailored coat with half lining is illustrated in Fig. 232.

Buttonholes for Coats or Suits.—There are various types of buttonholes which could be made for a coat or a suit.

TWO-PIECE BOUND BUTTONHOLE WITH FOLDS SUITABLE FOR WOOLENS OR HEAVY FABRICS.—Proceed as follows:

1. Mark placing for buttonhole with running stitches.

2. Cut a lengthwise strip of material $\frac{1}{2}$ inch wide and 1 inch longer than twice the finished length of buttonhole.



a, facing in place; *b*, half lining; *c*, seams bound;
d, hem turned and bound

FIG. 232. Coat with Half Lining

3. Fold this strip lengthwise and stitch it its entire length exactly in the center. Then cut in half crosswise. This makes two $\frac{1}{4}$ -inch folded strips with a center line of stitching.

4. Baste the raw edges of each folded strip on the line for buttonhole.

5. Stitch through the center of each strip on top of previous row of stitching to within $\frac{3}{8}$ -inch of each end. Do not stitch across ends.

6. Cut to within $\frac{1}{4}$ inch of each end of stitching then diagonally to each corner.

7. Turn the triangles of cloth to the wrong side. Turn binding strips to wrong side. At each end sew the triangle of cloth to the strips. (Fig. 233.)

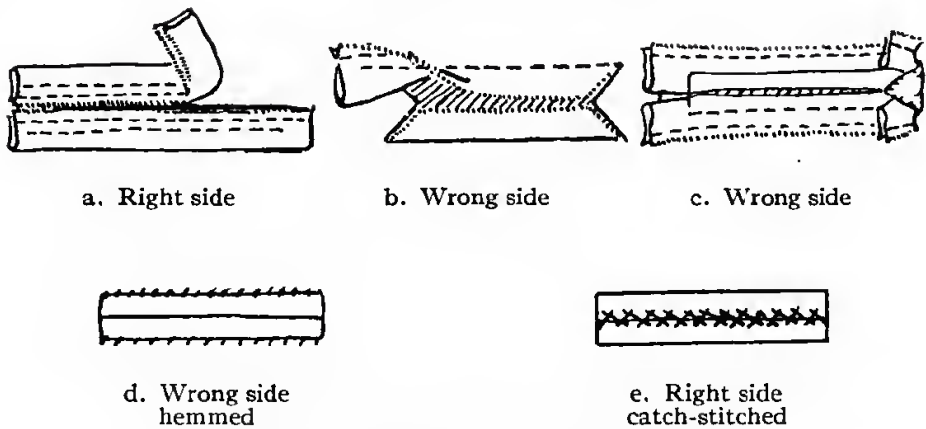


FIG. 233. Bound Buttonhole Made with Folds

For other methods of making bound buttonholes, see pages 200, 427.

TAILORED BUTTONHOLES.—The *tailored* buttonhole is used for heavy materials. Baste around the slit to be cut to keep the material from slipping. Use a stiletto and punch a hole at one end of the length of the buttonhole, then cut the length on a thread of the material or make a triangular cut (instead of using the stiletto here) which will form a resting place for the button. After cutting, either strand the buttonhole with twist or use a cord, which must be held taut while working the buttonhole. Proceed as in other buttonholes, working around the rounded edge. (Fig. 234.)

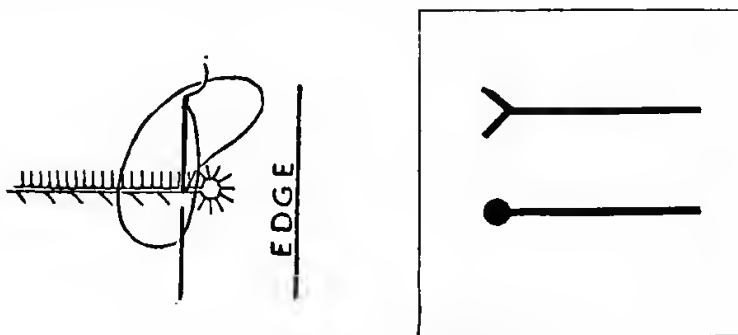


FIG. 234. The Tailored Buttonhole

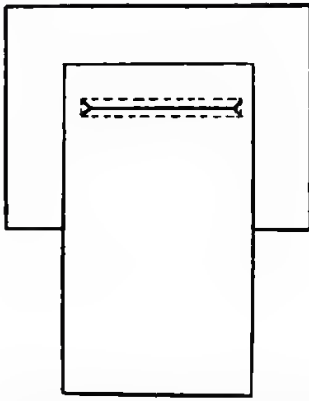
Pockets Suitable for Suits and Coats.—Pockets which are appropriate for coats and suits are now described.

BOUND POCKET WITH BINDING AND POCKET SECTION IN ONE PIECE.—*Method I.* Mark the placing of the pocket by a line of basting stitches. Cut the pocket twice the desired length and $1\frac{1}{2}$ to 2 inches wider than the opening of the pocket. Crease or put in a line of basting, stitch 2 inches from one end across width, and place this crease directly over the basting with the ends extending evenly on each side, and the right side of the pocket piece to the right side of the garment. Baste it in position.

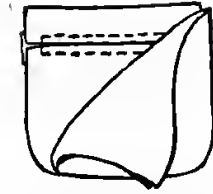
Method II. The binding and pocket piece may be folded in the center and applied in the same method as though creased 2 inches from the end. Half will be above and half below the basted line. Begin stitching at the center of one long side. When the corners are reached, lower the needle into the corner, lift the presser foot of the machine, and turn. Count the stitches at ends of pocket in order to make them alike. Overlap the stitches where the stitching was started. Cut on the basting line to within $\frac{3}{8}$ inch of end, and then clip diagonally to corners. Push the material to the wrong side through the opening. Press so that the seams lie naturally. Turn to the wrong side, press the small diagonal pieces back, forming sharp corners. No material will show at ends from right side.

Lift the lower section and bring it up to fill one-half of the opening. The upper section will fill the other half of the opening. Baste around the opening. Backstitch by hand across the bottom through the garment and the pocket on the crease of the seam, not on the binding or the garment—a small stitch on the right side, long stitch on the wrong. This stitch will not show on right side. It may be machine-stitched in the crease, but it is liable to show. It will be stronger for tailored garments. Bring the top and bottom sections together, baste and stitch around edges of pocket. Corners may be curved. Overcast the edges. Press and backstitch or stitch along the crease of the seam through the two thicknesses of the pocket at top of opening. (Fig. 235.)

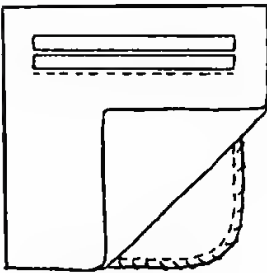
WELT POCKET.—The welt pocket is made in the same way except for the stitching around the opening. Fold the pocket



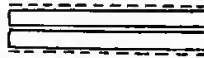
a. Pocket strip basted in place—
cut and slashed ready for turning



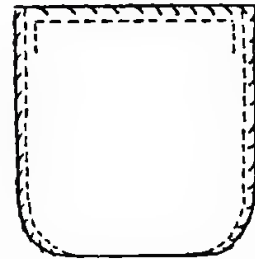
b. Turned to wrong
side



c. Right side with
stitching in place
on lower edge



d. Completed right side
with stitching below
and above edges



e. Completed wrong
side

FIG. 235. Bound Pocket

piece so that the bottom piece is 1 inch longer than the upper section, to allow for the welt. Apply the basting line on pocket to basting line on the pocket placing. Stitch $\frac{3}{8}$ inch from the basting and cut on basting line to within $\frac{1}{2}$ inch from ends, then cut diagonally to corners. Turn at the top so that the stitching of the seam is on the edge. Fold the bottom of the pocket opening so that the pocket material fills the opening. At the ends, turn back the little flaps and press. Turn to wrong side and seam to the pocket material. This will secure the ends. Finish the pocket as directed for the bound pockets. Fig. 236f shows finished welt pocket.

POCKET WITH AN APPLIED WELT.—Mark the pocket placing with a line of bastings.

The Welt. Cut a piece of the fabric twice as wide as the finished welt is to be and as long as the pocket slash, plus a seam allowance all around. Fold the welt in half lengthwise, wrong side out, and stitch the ends, clip the corners, turn the welt right side out, and press.

Lay the welt on the right side of the garment, below the line of bastings that marks the pocket opening, with its open edge along the line of basting. Place one pocket section on top of the welt, with edges coinciding, and baste to position. Lay the other pocket section above the line on the right side of the garment, with its edge exactly on the line of basting. Put a row of stitching $\frac{1}{4}$ inch each side of the line and tie the ends of the thread securely. Slash along the basting line to within $\frac{1}{4}$ inch from each end, then cut diagonally almost to stitching. Push both pocket sections through the slash. Turn the welt up and slip-stitch the ends in position. Stitch the pocket sections together and overcast the edges. (Fig. 236.)

POCKET WITH A LAP.—Stitch the lap and its lining with the right side together, press the seam open for clean-cut edge, then press lap flat. Turn to right side, baste around edge, press. Stitch if the garment is edge-stitched, or leave edges soft if dressmaker finish.

Mark placing of pocket by a line of basting. Baste a pocket section on the inside of the garment, placing the top $\frac{1}{2}$ inch above the line of basting that marks the opening of the pocket.

Cut a facing of fabric 2 inches wide and 2 inches longer than opening of pocket. Baste this on the right side of the garment, with its upper edge just touching the line. Stitch $\frac{1}{8}$ inch below the edge.

Lay the lap right side down, on the outside of the garment, with its finished edge upwards and its open edge extending $\frac{1}{8}$ inch below the line of stitching that holds the facing to the garment, and stitch $\frac{1}{8}$ inch above the top of the facing.

Slash along the basting, turning the edge of the lap up out of the way. Press the seam of the facing open and push the facing through the opening, letting it form a binding $\frac{1}{8}$ inch wide. Stitch along the line where the binding joins the garment. Turn the lap down and baste close to the upper edge.

From the inside of the garment, baste and stitch the lower edge of the facing to the pocket section, not to garment.

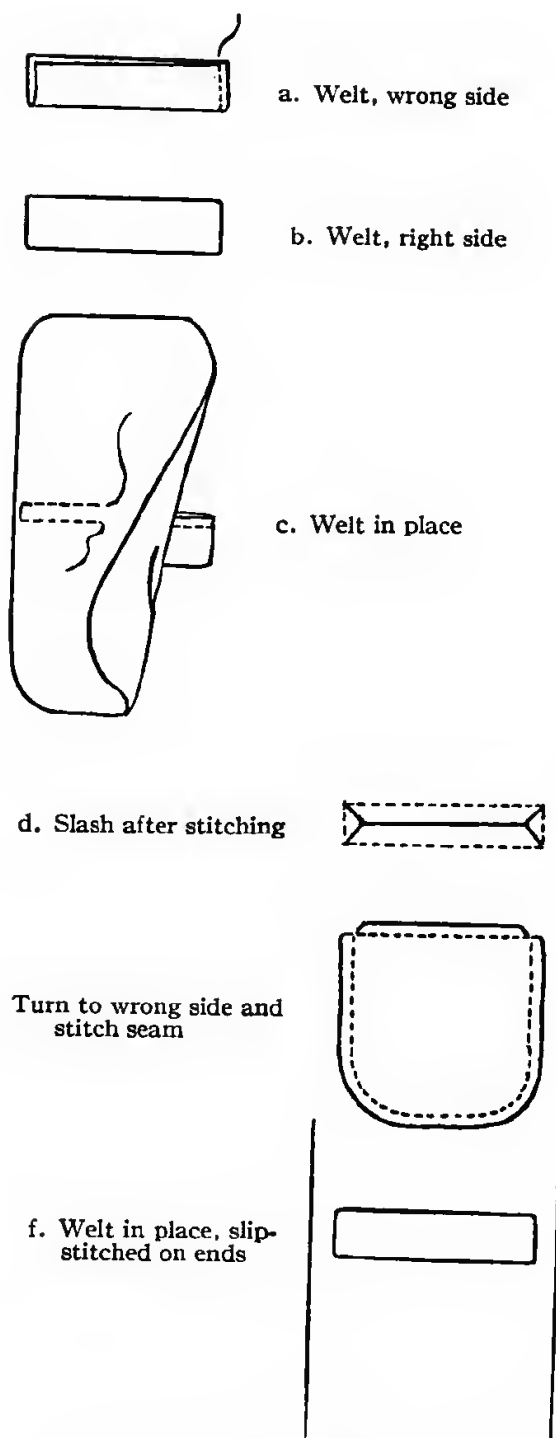


FIG. 236. Pocket with Separate Welt

Face the inner pocket section with a piece of fabric about $2\frac{1}{2}$ to 3 inches wide of same fabric as lap. Place the inner pocket section over the outer, with the edges even, then baste along the upper edge. If the garment is edge-stitched, stitch from the right side through all the thicknesses just above the line where the lap joins the garment. If the garment is not edge-stitched, slip-stitch the top of the inner section to the garment. Sew at each end to reinforce the opening.

Stitch the pocket sections together, and overcast the edges. Finish the ends with arrowhead tacks or bar tacks on the right side. Remove bastings and pull the lap through to right side. Press well. (Fig. 236.) It is similar to welt pocket except that lap is placed above line of basting. The lap may be shaped.

Decorative Methods of Finishing.—Coats or suits may be finished by means of bar tacks, arrowhead tacks or crow's foot tacks. These ornamental tacks are used at top of plaits, at ends of slashes, and as a finish at the ends of tailored pockets.

BAR TACKS.—The length and direction of the bar are marked and several long stitches are made close together from end to end of the marking line. The thread is carried through to the wrong side each time to make the bar stronger. The bar of threads is then worked over with loop stitches, either separate from the fabric to give a free bar, or made to include the fabric, which will give a bar firmly fastened to the fabric, and consequently stronger. (Fig. 237.)

ARROWHEAD TACKS.—The design must be clearly marked by tailor's chalk or fine running stitches (which can be removed. Hold the fabric with the design firmly stretched in the left hand. Bring the needle up at point *A* (Fig. 238) and insert it at point *B*, taking a tiny stitch. Insert the needle at *C*, bring it out close to *A*. Make a second stitch at *B*, close under the first at *B*, then down very close to *C* and out close to *A*. Each time a stitch is taken it must follow the outline sketched or marked. On the wrong side each stitch at the

top at *B* will be a little longer than the preceding stitch. The last figure shows the finished arrowhead.

CLOTH CROW'S FOOT TACKS.—A triangle design is marked with slightly indented center on each side. Bring the needle up at *A* in Fig. 239. Take a small stitch at *B* with the needle pointing to the right. Take a small stitch at *C* with the needle pointing up. Insert the needle again at *A*, taking a stitch close to the first needle point to the right. The last figure shows a finished crow's foot tack. Make the stitches on the marked line and always outside the preceding stitches. This gives the drawn-in appearance at sides.

LOOSE FRENCH TACKS.—These are made by taking a small stitch in the garment and one in the section which is to be tacked to the garment, leaving $\frac{1}{2}$ inch or more of the thread between. Pass the needle back and forth again, putting it into the same place, then work several loose loop stitches over the three strands of the thread. An overcasting stitch may be taken in place of the loop stitches. (Fig. 240.)

Collars for Suits and Coats.—If the neckline is collarless, it will be finished with a shaped facing.

MAKING A COLLAR WITHOUT INTERLINING FOR SEMI-TAILORED OR DRESSMAKER TYPE OF SUIT OR COAT.—Pin the edges of the collar together, stretching the facing to fit the outside edge. (Chapter 6.) Baste, stitch, and trim seams and clip corners. If the fabric is bulky, trim the seam of facing narrower than upper section. Always press seams open before turning, press after turning to right side, baste, and press again. It is the constant pressing involved in making coats and suits that contributes to their smartness.

COLLAR WITH INTERLINING FOR MORE TAILORED EFFECT.—Cut a piece of muslin like collar for interlining. Place the interlining to the underside of collar. Use tailor's basting to fasten the interlining to the facing. In tailor tacking keep the stitches small on the right side and long on interlining side.

Place the facing on outer collar, right sides together. Baste around edge. Stretch to fit, stitch seam, clip corners, press

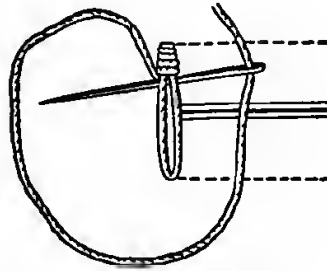


FIG. 237. Bar Tack

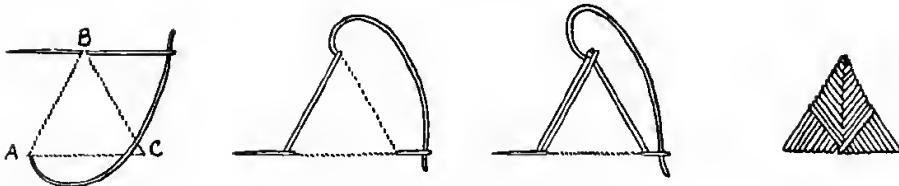


FIG. 238. Arrowhead Tacks

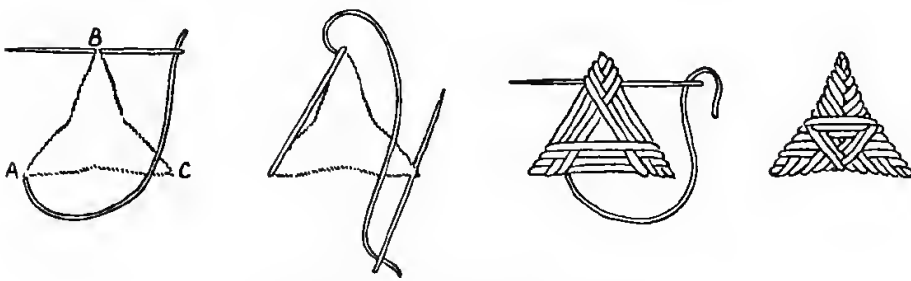


FIG. 239. Crow's Foot Tacks

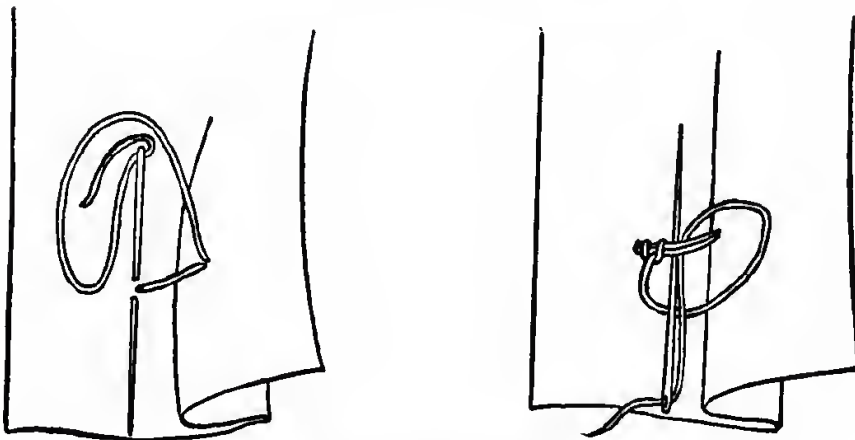


FIG. 240. French Tacks

seam open, trim off one seam if too bulky. Turn collar and press, baste around edge, press, and edge-stitch. Press again. (Fig. 241.)

ATTACHING COLLAR TO COAT.—Place the collar, right side of facing to right side of coat. Center back to center back line, notches matching, and end of collar to center front. Pin with pins at right angles to edge. Baste and stitch at neckline on seam allowance, clip on curves, press seam open, and press



FIG. 241. Interlined Collar with Interlining Catch-Stitched



FIG. 242. Collar Attached—Fitted Facing for Neckline Finishing

again with closed seam (a curved seam will be pressed on tailor cushion). Seam will be covered by upper part of collar if material is light-weight; turn under free edge (upper collar) and hem to line of stitching at neckline. If fabric is bulky, turn both edges of seam down at neckline and apply a shaped facing if half lining is not used. If half lining is put in coat, catch-stitch seams flat and hem lining to seam stitching. (Fig. 242.)

Cuffs for Coats and Suits.—Cuffs should be completely finished before attaching to sleeve. If fabric is heavy, a lining material may be used for inside section of cuff.

TO MAKE OPEN CUFF.—Pin, baste, and stitch around outer edges, stretching lining to fit outer cuff.

Trim seams, clip corners, press seams open, and turn to right side. Press, baste around outer edge, and if tailored effect is necessary, to match rest of coat, edge-stitch. If soft effect is desired, press but do not stitch. Interlining may be applied as in collar. (Fig. 243.)

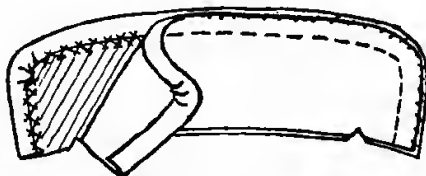
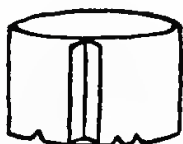


FIG. 243. Open Cuff with Interlining Catch-Stitched and Facing Slip-Stitched



a. Seams pressed open



b. Interlining and facing

FIG. 244. Closed Cuff

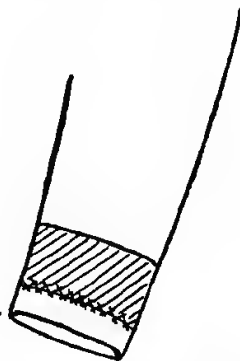


FIG. 245. Interlining at Wrist

FOR CLOSED CUFF.—Stitch seams of facing and outer section of cuff. Open and press seams. Place right sides together, seams coinciding, baste, and stitch outer edge. Where one seam crosses another, trim lengthwise seam to avoid bulk.

Press seam open. Turn to right side, baste at edge, and press again. (Fig. 244a.)

TAILORED CUFF WITH OPEN ENDS.—Cut the interlining like the cuff pattern. Trim off the seam allowance of the upper edge and ends. Baste the interlining to the outer edge of cuff, turn the cuff edges over the interlining, and catch-stitch them (Fig. 243). Turn under the edges of the under section of the cuff so that it does not show from the right side, baste and slip-stitch it.

CUFF WITH A CLOSED SEAM.—Stitch the seam in the under section $\frac{1}{8}$ inch deeper than the upper section. Press seams open in both sections. If an interlining is used cut like the cuff, trimming off the seam allowance on the outside edge. Lap and catch-stitch the ends. Turn the edge of the outer section over the interlining and catch-stitch. Turn under the top of the under section enough so that it does not show from right side. Baste and slip-stitch in position. (Fig. 244.)

Interlining at wrist for tailored or semi-tailored coat or suit is advisable. A bias strip of interlining should be basted into the wrist just above the turning line of the hem; then the cloth of the coat may be turned over it to the wrong side and catch-stitched. The raw edge of coat and interlining may be covered by coat fabric or a ribbon may be applied by slip-stitching. (Fig. 245.)

TO ATTACH CUFF.—Place right side of facing of cuff to right side of sleeve edge, pin, and baste. The pattern will provide for easy finishing. Stitch seam and slip-stitch facing; turn the top of cuff over the edge of sleeve. Baste and press. Cover raw edge of seam with a narrow facing.

Alternate Method. A cuff may be attached by placing the edge of cuff to wrong side of sleeve; pin, baste, and stitch seam. Turn double cuff to right side, trim seam very narrow on one edge, catch-stitch outer edge of seam flat to sleeve. Press over small end of sleeve board. This seam is on right side between cuff and sleeve.

In the dressmaker type attach cuffs as given in Chapter 6.

To Finish Bottom of Coat.—Press the hem in place from fold up to edge, baste, and catch-stitch edge of hem to garment. Cover raw edge of hem with facing, or raw edge of hem may be bound, then slip-stitched to coat. (Fig. 232.)

Seams are all pressed open and bound in an unlined coat.

To Make the Skirt for a Suit.—Follow these instructions in planning the skirt for a suit.

1. Straighten ends of fabric.
2. Press fabric and pattern.
3. Place pattern on fabric following layout. Directions given in Chapter 5 for placing on different varieties of fabrics.
4. Cut, following pattern. Notches are cut outside of line of pattern.
5. Place basting line on center front, center back; mark seam allowance by tailor tacking; mark darts, location of pockets, etc., with tailor's tacks.
6. Remove pattern.
7. Baste in darts; do not stitch until after skirt is fitted.
8. Decide upon type of seam to be used.
9. Pin and baste all seams, leaving seam on left side open for placket.
10. Pin in temporary or trial hem.
11. Plan belt, test with garment at first fitting.

FOR FIRST FITTING.—Check seam directions.

Are the darts correctly placed, and of right size?

Determine correct length of skirt for becomingness and observation of style length as far as possible.

Make alterations as necessary.

Rebaste on alterations.

Stitch darts and prepare seams by method selected. Apply placket and belt.

Plaquettes for Skirts.—Skirt plaquettes can be made in various fashions.

MAKING A TAILORED PLACKET.—Stay the edges of the placket opening by machine, stitching the width of the presser

foot $\frac{1}{8}$ inch from the edge. Always mark the seam allowance on each side of the placket with a line of basting. These bastings should be in a continuous line with the stitched seam. They will aid in placing the placket facing and binding to avoid their showing when placket is finished. Plackets require great care in handling to prevent stretching and bulges in the finished placket. The length of placket is determined by width of shoulders. It must be long enough to slip on easily. The type of placket, as well as finishing, is determined by the type of skirt, the fabric, and its position on the skirt.

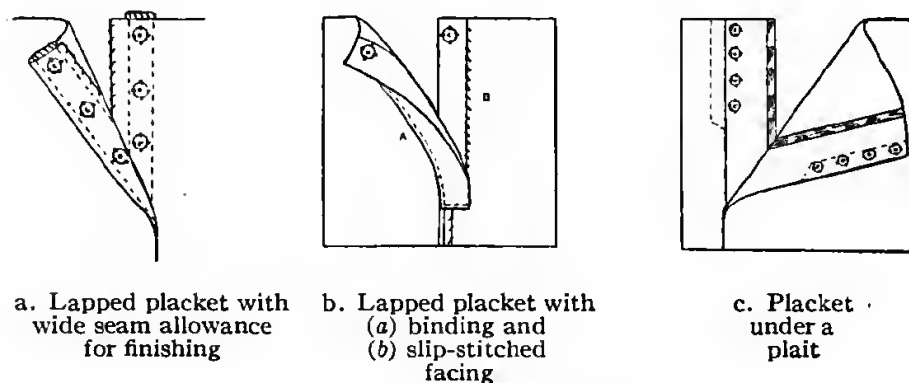


FIG. 246. Plackets for Skirts

Sometimes the design calls for a placket in a slash; at other times in a seam or under a tuck or plait.

If an allowance for the overlap and underlap of the placket can be made on the skirt when cutting it out, it simplifies construction; otherwise, it is necessary to add lengthwise strips of fabric to bind and face the placket edges. To make a placket with sufficient seam allowance, clip into the stitching 1 inch below the placket opening.

On the left side of the opening, if the fabric is heavy, let the fabric extend and form the underlap. At the place for sewing on the snaps, stitch a piece of tape underneath, with the edge of the tape $\frac{1}{8}$ inch outside of the basted line. On the right-hand side of opening, stitch a piece of tape for reinforcement on wrong side, touching the guide line of basting. Fold the seam allowance to the wrong side with the guide line of

basting directly on the edge. Finish both edges of the placket the same as the edges of seam of skirt. Sew the snaps in place, but do not allow stitches to show on right side. (Fig. 246a.)

A LAPPED OR TWO-PIECE PLACKET.—This may be used where there is no strain. Cut the placket strips 1 inch longer than the opening. The binding for the left side may be cut about $2\frac{1}{8}$ inches wide. The extension need not be over $\frac{3}{4}$ of an inch when finished. The facing to be sewed on the right side of opening need not be over $\frac{3}{4}$ inch finished. The exact width of cutting of strips depends upon fraying of fabric. Estimate for width of seam plus allowance to be turned under for facing. Stitch the ends together at bottom and overcast the edges. Slip-stitch the facing and hem the extension. (Fig. 246b.)

A simple lapped placket can be made by binding the ravelled edges of the placket opening. Use lengthwise strips of the fabric, or a lighter weight fabric matching in color if the fabric is heavy. Cut the strips 1 inch longer than opening and wide enough to serve as binding. Stitch strip on top of seam allowance; then fold over the edge, letting it extend under the facing, but do not turn under edge. This will also serve as a reinforcement for the snaps. On the extension side, stitch on in the same way, but turn under edge, letting it extend far enough over edge for sewing on of snaps.

SEWING SNAPS ON PLACKET.—The left side forms the underlap or extension on which the right side or overlap lap will rest. The ball is sewed on the overlap and the socket on the underlap (page 196 for directions for sewing). The chief requirement of any placket is that it must be smooth, inconspicuous, and made as simple as possible.

A PLACKET UNDER A PLAIT OR TUCK.—Cut the length of the placket opening on the crease of the underfold of plait. Bind both edges with seam binding, and reinforce with a tape if necessary for sewing on of snaps. (Fig. 246c.)

Belts on Skirts.—Skirts are finished at the waistline by means of bands or belts.

INTERLINING BELTS.—Belts should be interlined if they are to keep their shape. Cut interlining one-half the width of belt pattern and the same length. Attach interlining at one end of belt while stitching end seam. Stitch lengthwise seam. Turn belt back over interlining. Interlining should just fit inside of belt. Finish other end of belt by turning seam allowance close with alternate slip-stitching. (Fig. 102a, Chapter 6.)

PLACING FABRIC BELT ON SKIRT.—Cut with its length on the length of fabric. In width it should be twice the finished width, plus seam allowance on both edges and, in length, the waist measurement plus 4 inches. This will allow for the placket finishes with $\frac{1}{2}$ to $\frac{3}{4}$ inch turning at the ends to reinforce for the fasteners. Fold it along its lengthwise center, right sides together. Stitch one end of belt, clip corner, and turn belt with right side out. Baste close to folded edge to prevent belt from twisting. Begin at right-hand end, edges of belt coinciding with top of skirt pinned to other end of skirt, pins at right angles to edge. The exact length of belt may now be determined. Cut off the surplus, allow $\frac{3}{4}$ inch at end for seam allowance. Baste belt in place; stitch, holding skirt up, close end of belt; turn under free edge of belt on seam allowance; baste and hem at machine stitching on wrong side. If it is to be machine-stitched, stitch from right side after basting.

If the belt is to be machine-stitched, reverse the directions, placing on wrong side first, then turn in free edge on right side, baste and edge-stitch from right side. Do not hem on right side.

INSIDE OR STAY BELT UPON WHICH THE SKIRT IS HUNG.—Use ribbed skirt belting 4 inches longer than waist measurements, for finishing ends and darts if necessary. The width of the belt should be as called for in pattern. Belting for washable skirts must be shrunk before being applied.

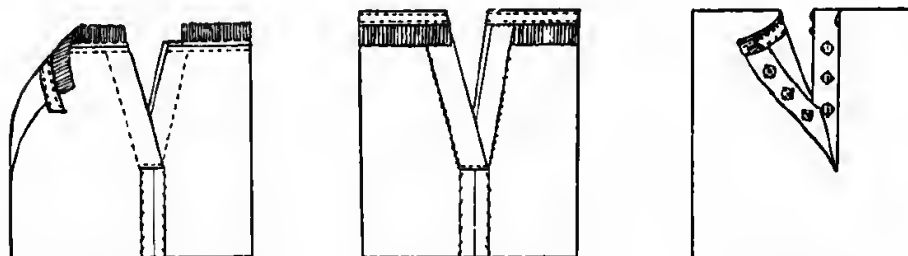
Place the belt in place on the waistline and if darts are needed to make the belt fit, pin them in place. Be sure that there is an allowance of 1 to $1\frac{1}{2}$ inches at the ends of belt. Take off the belt, stitch in the darts, open and stitch them flat.

Mark for the turning ends of belt. When the darts are in, put on the belt.

The effect of the skirt at the waistline depends upon the care in arranging the belt at the waistline. If a high waistline is called for, place the wide end of the dart at the waistline with the points above. This makes the belt fit snugly at the waistline, with the necessary increase above the waistline.

If a natural or low waistline is called for, place the wide end at the waistline with the points downward. The belt must fit accurately and easily enough for comfort, in order to keep the top of the skirt trim in appearance.

Fold back the ends of the belt so they meet at the closing. Sew on hooks and eyes, with the hooks $\frac{1}{8}$ inch inside the right edge of the belt. The eyes must be sewed on to extend



a. Belting on wrong side of skirt, with tape on right side

b. Wrong side with belting and tape turned to wrong side

c. Right side

FIG. 247. Inside Belt

just enough to allow the hooks to be put in place. Cover the raw ends of the belting with seam binding, or edge-stitch the ends with a second row of stitching. (Fig. 247.)

TO HANG THE SKIRT.—Put on the finished belt, properly adjusted for the opening of the skirt and for the correct placement of the darts.

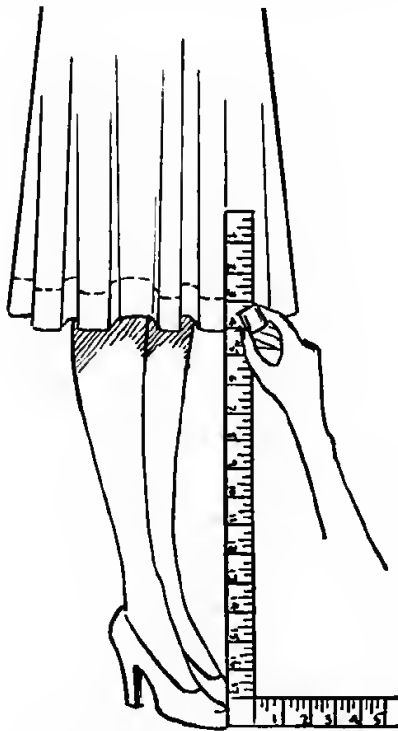
Then put on the skirt, pin the top of the skirt at the center front, center back, and at each side seam with the top of the skirt a seam allowance above the belt. Pin up the placket from the bottom of the placket to the top, accurately, with the underlap and the overlap exactly in place.

Adjust any fullness around the skirt, keeping the seams and

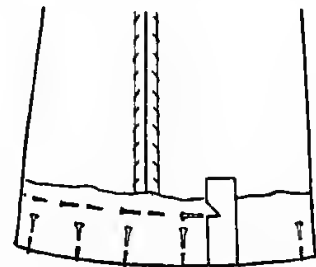
grain line in position at right angles to the belt. Place pins at right angles to the edge and close enough to hold the skirt in place on the belt.

Take off the skirt. Fold the seam allowance over the top of the belt. Baste, press, and stitch. If stitching on the outside edge, stitch from the right side. If no stitching is to show, fold back the skirt, and stitch close to the edge. Cover the raw edge of the skirt with seam binding or Prussian binding.

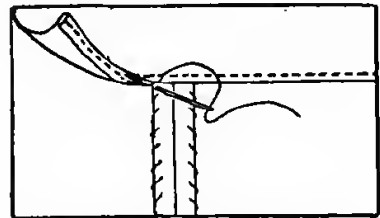
To Finish Skirt at Bottom.—Let the skirt or dress be adjusted on the figure with the openings closed and the belt adjusted. The hem can be fitted more easily, if the one being fitted, or the model, stands on a table or a fitting stand, for the fitter must sit so that her eyes are on a level with the hem to be turned. It is necessary to turn up the entire skirt and the fitter should move around the model. A ruler, tailor's square, or notched cardboard may be used, or a commercial marker



a. Skirt marking for length



b. Pins inserted at gauge mark on hem



c. Edge of hem stitched and slip-stitched to garment

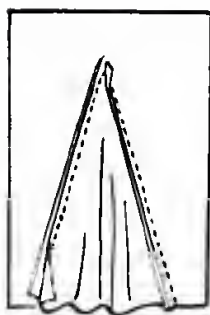
FIG. 248. Finishing Hem of Skirt

may be adjusted to the skirt length and the length indicated with tailor's chalk, pins, etc. (Fig. 248a.) Let the model stand before a full-length mirror and raise the skirt until she has secured the height at which she wishes her skirt to hang from the floor. Then the distance from the floor to the edge of the suspended skirt should be measured and marked on a measuring implement. The model should stand at ease on both feet with her arms hanging loosely at her sides. As necessary, the fitter will move around the model and weave pins in at the skirt height every 4 inches. If the fitter occasionally steps back from her work, she will see any mistakes more easily. Then the garments should be removed from the model, the pins adjusted, and the hem basted in place. If a long basting stitch is run along the bottom folded edge, it will help to keep the length, if there is any reason for changing. With the turned hem toward one, the narrowest point should be found. If this is the width of the hem desired, a cardboard gauge the depth of the hem should be cut and used to measure all around, with pins put in at the gauge mark. (Fig. 248b.) Surplus material should be cut off and the hem finished in a manner appropriate to the fabric. (Fig. 248c.)

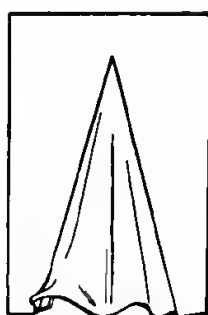
Godets.—Godets are segments of a circle usually set in a seam or slit in a skirt for the purpose of adding fullness or flare to the skirt. Since the edges of the godet are very bias, care must be exercised in placing them.

To set in a slit of a skirt, cut on a thread of the garment the required depth. Beginning at the bottom of the slit, pin and baste the edges of the godet to edge of slit, taking a very narrow seam from garment side but keeping to the seam allowance on godet. Taper the seam as it nears the top of slit to 2 or 3 threads. Overcast or loop at point to prevent tearing out. Press from point down. Do not set a godet in material that frays easily. (Fig. 249a-b.)

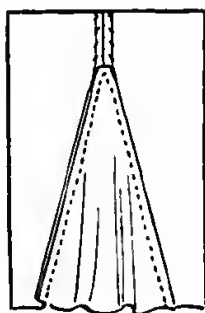
To set a godet in a seam, clip the point of the inset to avoid bulk. To turn a sharp point, fold the point down first, as in Fig. 249c-d, then turn in each edge and clip off excess seam. Turn to right side and edge-stitch.



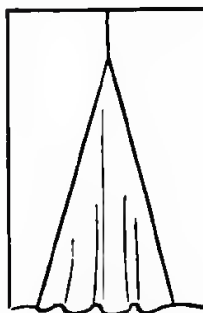
a. Godet set in slash, wrong side—clip on garment at top



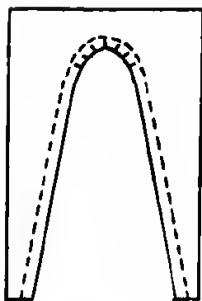
b. Right side



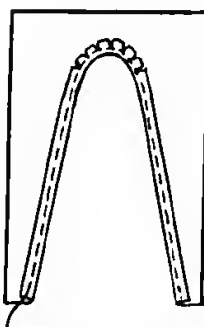
c. Godet set in seam, wrong side



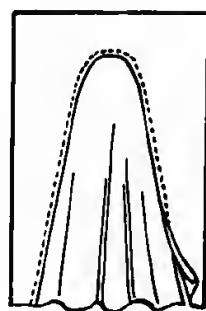
d. Right side



e. Slash with a curved top—cut for a godet



f. Seam allowance turned under



g. Godet set in cut—right side

FIG. 249. Godets

Very circular godets must be treated the same as circular skirts, for they will sag and stretch to some extent. Do not stitch the seams, and leave the hems unfinished until the skirt or garment has been allowed to hang for a day or two.

When the bias edges of a godet are basted to a straight edge, the bias is apt to pucker. If it does, rip and repin, rebaste, and stitch more carefully. Keep the slash side toward you, sew from the hemline toward the point, then down on the other edge toward hem. Clip off the point and press seams open.

To set a godet in a cut with a curved top, slash on curve close to sewing line. (Fig. 249e, f, g.) Turn under seam allowance keeping a smooth curved outline. Place godet with seam edges even, pin and baste in place. Stitch on seam allowance or edge-stitch from right side.

Plaits.—There are several kinds of plaiting, each having a season of popularity. Knife, box, and inverted plaits are used when straight line effects are in fashion. Accordion, fan, and sunburst are used to add fullness and flares to skirts, collars, cuffs, and frills.

To MARK PLAITS.—Plaits are always indicated on the pattern so markings should be followed accurately. Plaits are more successful if each outside edge of the plait is on an exact straight grain of the fabric. Use two different colors in marking the outer and inner fold of plaits for aid in folding.

To MAKE PLAITS.—A plaited section is often set into a slash in the skirt. If set in with a point, care must be taken at the point. Mark the center line of the plait section with a basting thread. In a slashed opening, if the plaits are finished with a point, a very narrow seam must be stitched on the skirt side, tapering gradually to within 2 or 3 threads at point. The width of seam on plait section will be the regular seam allowance as planned in pattern. The plaited section should extend 1 inch above opening at top of slash. Baste and stitch, press seams open. Turn the under section back at seam line and bring the seam line to marked plait line on plait section. Pin, baste, and press. Catch-stitch folds of plaits to hold them

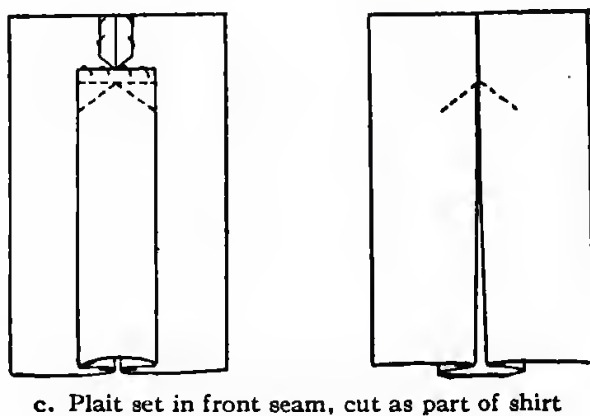
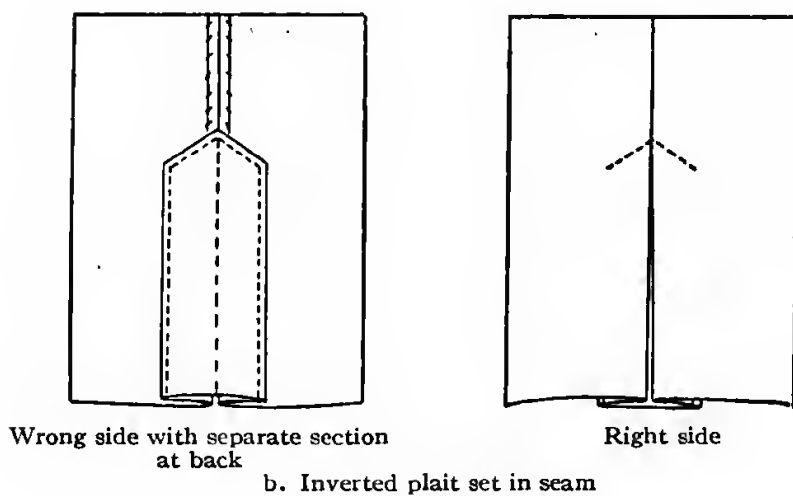
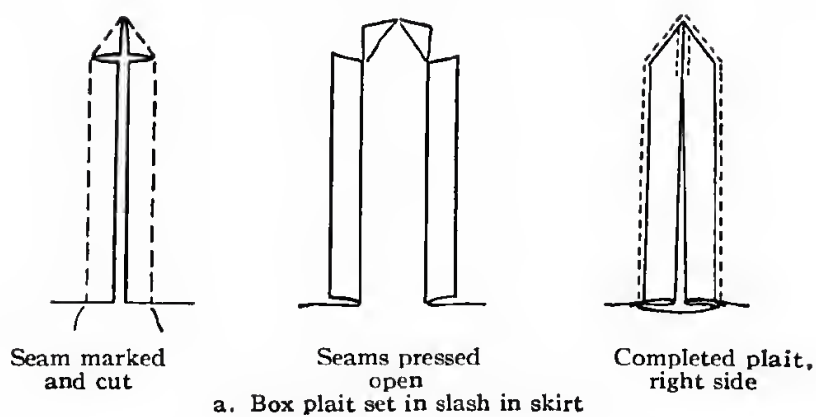


FIG. 250. Plaits

firmly in place while constructing garment. For perfect hanging plaits with correct edge at bottom, baste plaits with correct edge at bottom, baste plaits to bottom and keep basted until the hem is turned. (Fig. 250a.)

INVERTED PLAITS.—Inverted plaits may be set in with seam at edge. The seams are stitched, the top is clipped (Fig. 250b), the seam at top is stitched and overcast. To hold in place on a crossgrain of garment, it may be blind-hemmed with long stitches, or it may be stitched from right side on a straight crosswise grain if rest of garment is stitched.

SIDE PLAITS.—Side plaits are often made in narrow skirts to allow fullness in walking. The outside edge of plait is made to come in line with the seam of the garment. The inside edge is smoothed out and the seam stitched; the top of plait may be sewed in a straight line or a slanting line as desired.

BOX PLAITS.—A box plait may be cut as part of the skirt, if the skirt has a seam down the center front, by placing the plait seam on the fold when cutting out for the seam line of skirt. (Fig. 250a.) All box plaits that do not extend to top of skirts should be stitched across the top with points up or down. Box plaits may also be made with a separate section at back, as at Fig. 250b.

In making plaits, to be sure that they will hang straight and not spread, there should be enough fullness to hold the upper and inner edges in place.

Some fabrics hold a crease better than others and, therefore, are more satisfactory for plaited skirts. Both the upper and inner folds of plaits must be on a straight lengthwise thread of the fabric. Clip seams at top of hemline and press seams open in hems for successful hanging of plaits.

PLAITED SKIRT.—To mark, baste, and stitch plaits, a line of basting should be placed exactly on the thread of the fabric where the plait is to be folded, and another along the thread of the fabric where it is to be basted down. The pattern gives right proportions, but you must be sure that you are following a straight thread of fabric; so, after tailor tacking your fabric,

be sure to straighten your markings to coincide with the grain of fabric.

Construction of Other Garments

Foundation Garments.—Foundation garments to be appropriate for the present-day style tendencies must be simple in cut; adequate for protection (though scant and few in number); adapted to the type of present-day silhouette; and comfortable, durable, and inconspicuous.

The type and kind of undergarments selected by each of us would depend upon what we have found to be suitable to our own needs. To aid us in our selections of new lines, colors, and fabrics, a class exhibit or loan exhibit from a department store would give us suggestions that could be adapted to the kinds of garments we have found adequate for our use.

The exhibit should consist of step-ins and shorts, bloomers, bandeaux, correct type of brassières, and slips—straight-line and bias-cut, some with built-up top and others with bodice top in light and dark colors. This assembled collection would give suggestions for selections of patterns, fabrics, and methods of trimming or decorations adapted to these garments.

The steps of construction will be the same as followed in garments that have been constructed previously.

Trimmings and suggestions for decorations will be found in Chapter 12 and earlier in this chapter. For selections of appropriate seams, edge finishes, etc., see Chapters 6, 12, and earlier in this chapter.

Blouses, Tailored or Dressmaker Type.—Blouses are an indispensable garment in the school girl's wardrobe, both for school and special occasions. Blouses should be adapted to needs in style, fabric, and color. For school wear, durable fabrics and simple styles would be selected. For dress occasions, silk or sheer fabrics may be used with fine hand finishes.

Selection of style, pattern, texture, and color would follow the suggestions given in this chapter.

Steps of construction would follow suggestions given in this chapter and Chapter 6.

For seams, finishes, and edge finishes, Chapters 6 and 12 would give further suggestions.

Accessories.—Now that we have decided upon what we will construct, we must consider those finishing touches that are so necessary for completing the ensemble.

This is the time, while we are making a study of styles, fabrics, and color, for us to plan all those details so necessary if we are to appear smartly and appropriately clothed.

In selecting all the details of our costumes, such as hats, gloves, belts, purses or bags, handkerchiefs, scarfs, neckwear, and jewelry, we should keep uppermost in our minds the principles and standards that have helped us in our garment selection.

There must be a definite unity in our plan, not only as it is expressed in color harmony, proportion, or scale, and in texture combinations that are harmonious, but consideration must also be given to a selection based on those details that are appropriate for the season, the time of day, the spirit of the times, as well as the occasion when they will be worn.

Since few of us can afford complete sets of accessories for every type of costume, we should aim to learn how to choose and adapt those accessories we select to serve for more than one purpose.

Simplicity must be the keynote of the girl who wishes to appear well dressed at all times. Overdressing or the use of elaborate accessories should be avoided, and if we give careful thought in our planning to select fewer accessories and the best of any type that we can afford, we shall be assured of a better appearance.

The selection and wearing of accessories is an important and individual problem and, because of the constant change and great variety that are stressed each season in the types of costume accessories, no definite suggestions can be given for choices.

Review Chapter 12, *Attractive Clothes*, for more definite suggestions on "How to Select and Wear Accessories."

QUESTIONS

1. Give directions for placing and pinning patterns on sheer fabrics. Give reasons for each step.
2. Tell what precautions should be observed in pinning, basting, and stitching seams of transparent fabric.
3. Explain how to make a bound buttonhole in sheer fabrics.
4. Describe the method you would use in making a bound buttonhole on a tweed coat.
5. Suggest two ways of finishing the ends of a set-in pocket.
6. Outline the method of finishing the top of a cloth skirt with a fabric belt.
7. Explain how to hang a skirt on an inside belt.
8. Discuss (a) the value of pressing each process as finished in the construction of a coat, (b) the value of a final pressing.
9. Why should all wool fabrics be shrunk before being made into garments? How can you determine whether a fabric has been shrunk or not?
10. How would you finish the seams in an unlined coat? Why?
11. Explain how to make a two-piece sleeve.
12. Tell how to make, interline, and attach a collar to a coat.
13. In the planning of pockets for a garment, what points should be considered?
14. Suggest some principles that will help you select accessories with discrimination.
15. Discuss the styles, textures, and colors that are being featured for the present season in shoes, hats, gloves, and bags.
16. List the economic factors to be considered in buying fabrics for dresses for formal wear.
17. Explain how to press the seams on (a) a silk dress; (b) a transparent fabric; (c) a wool skirt.
18. (a) Suggest a suitable placket for a woolen skirt. (b) Tell how to make it.
19. Outline a plan for fitting a tailored coat.
20. Compare the cost of a suit made at school and one purchased ready-made.

REFERENCES

Anderson, Minnie A. *Coat and Suit Making*. Burgess Publishing Co.

Baldt, Laura I. Clothing for Women. (Rev. ed.) J. B. Lippincott Co.

Butterick Pattern Co. Butterick Dressmaking Book.

Condé Nast Publishing Company. Vogue Book of Smart Dressmaking. (Booklet.)

Hall, Helen. Home Sewing Course. Booklet 5. Sye Foundation Pattern Co.

McCall Corporation. Dressmaking Made Easy. (Booklet.)

Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress. Houghton Mifflin Co.

Simplicity Pattern Company. Sewing Book. (Booklet.)

CHAPTER 14

STANDARDS FOR THE SELECTION OF READY-MADE GARMENTS

Cold wintry blasts are blowing and we find we must buy a new fall coat. Our first consideration, if we are intelligent buyers, should be: "Where do I want to wear that coat and how often?" Let us suppose it is an everyday coat we need to wear to school, to the movies, to the museums, and wherever else our everyday life leads us. Our second consideration should include an investigation into our present wardrobe. What color dresses, hats, shoes, bags, etc., do we possess that are still wearable? Perhaps our accessories are brown and our dresses in colors that go with browns, such as green, beige, aquamarine, blue, etc. Then our coat must be *brown*.

Intelligent Buying.—Now that we have decided upon the type of coat we want and the color we must have, by what standards shall we judge the purchase of a coat? Many women, not trained in the fine art of selecting clothes, would go into a few stores, find a coat that they admire, and buy it without further ado. Naturally, we are going to care a great deal about the coat we buy, but we are not going to buy it haphazardly just for the sheer love of it. We are going to be sure that during the two to three years we shall have to wear that coat, it will continue to give us as much pleasure and satisfaction as can reasonably be expected. This is planned, intelligent buying.

Style.—As students of the clothing arts, we are acutely conscious of *style*. We have studied style trends and we know the prevailing silhouette. Let us only take care that the style we select is a fashion and not a *fad* as discussed in *Attractive Clothes*, pages 130-131. It is a good plan to buy a style that

is as simple as possible and yet in fashion. The first new styles to appear on the fashion horizon are usually what is known as "high-style" models. The following season they may still be good taste or they may be absolutely "out of style." If they are truly beautiful and becoming to many women, the chances are that "high-style" models will be adapted and widely worn. If, however, they are a bit bizarre, difficult to wear, or for any reason do not click with feminine tastes, they are *passé* in no time. Be sure, therefore, that the fashion mode has had a chance to settle and take on its permanent form before you make your selection.

Becomingness.—There are usually a number of fashionable silhouettes on the market from which to choose, and this leads us to our second standard, which is *becomingness*. Styles which are becoming emphasize our best points and conceal our defects. They accent out personality and make our appearance individual. Let us imagine you have now found a good-looking brown coat with a beaver collar. You try it on. It has simple yet fashionable lines. The silhouette is good—it has padded shoulders which conceal your narrow ones. It has a molded waistline which emphasizes your small waist. It has a fine, free skirtline. What is wrong with it? It is not completely becoming—and you soon realize by trying on other coats that you have too much brown around your face. A bright woolen scarf might alleviate the situation—but a lynx collar is a better solution. The gold and white lights in lynx fur are the crowning touch! They give you a better frame for your face. The entire coat has now taken on a new meaning. It is not only a fashionable coat, it is becoming. It is your *own* coat—it looks as though it were designed especially for you. Perhaps now you are completely satisfied and ready to buy it. But your training in clothes makes you cautious. There are other points to consider.

Durability.—You want to be reasonably sure that this beautiful coat is constructed well and of the best materials your money can buy. You do not look for Russian Lynx and

Rodier woolen when you pay \$35.00 for your coat—but you do expect a good grade of domestic lynx and a durable quality of wool. Are you getting it? You have learned a little about furs before. You know that good fur is expensive. Therefore, it is better to have a little fur and have it of fine quality, than to have a large collar of inferior quality. It will look better for a longer time. Cheap fur will shed and get matted and lifeless after a few months.

You have studied fabrics quite thoroughly and should be a rather good amateur expert by now. This is your chance to put your knowledge to practical use. Analyze the fabric of your coat as to fiber quality, weave construction, and finish. Take home a sample if you can and submit it to the tests you have learned. First perhaps you find out it is "all wool." That means nothing. There are 32 different kinds of sheep and 14 different parts of each kind from which woolen fibers are derived. Test the lengths and strength of these fibers. You want fabrics made of high-grade, long, undamaged fibers in firmly twisted yarns, and balanced weaves, for durability's sake. There are two main types of fabrics—worsted and woolens. True worsteds are made of long, good-quality, combed wool fibers, and the fabrics have definite weaves and firm finishes so that the materials wear well and keep their shape. Examples are dress chalice, wool crepe, serge, and suiting. Woolens are heavier and therefore warmer than worsteds. Also their weaves are fulled and felted, making it possible to cheapen and even adulterate poor qualities with short, inferior wool and less-expensive fibers. However, all mixed woolens are not objectionable. At one time a wool fabric was believed to be good only if all wool, but some mixtures such as we now have are better suited for some special needs. For example, if you wish a washable wool dress for summer, possibly you would prefer a wool-and-cotton mixture because the cotton lessens shrinkage. You would naturally have to expect the material to wrinkle more readily and require more pressing than pure wool.

You can usually get better value in wool fabrics of standard

weave. Novelties are generally high in price regardless of quality, partly because they often require special machinery which must be discarded when the fad has passed. This adds to the cost the consumer must pay. Also, in the effort to produce something new and unusual in appearance, good construction of yarn and balance of weave are sometimes sacrificed. For example, think of the recently popular wools with large knotty yarns and loose open weaves that caught and fuzzed up so easily. These fabrics gave little real service; yet their price was high because they were ultra-fashionable. Unless your circumstances permit luxuries such as these, you will be wise to get staple fabrics instead. Choose wool, as well as other fabrics, for the qualities that give service, rather than for fashion alone.

Workmanship.—If your coat has survived the test for quality fabric and fur, your next worry is its construction. Where you find good quality in fabrics, you are very likely to find good workmanship. But it is wise to be sure. A good-quality garment fits neatly and keeps its shape. This means that every piece of it is cut accurately and with the right grain of the material. You have to be alert, though, to be sure of getting quality in the cut of a dress. Many manufacturers of "bargain" garments juggle pattern pieces around and cut just any way, so as to use the least possible yardage. These cheap imitations of good dresses often look "just as good" as the well-made garments. But they are not, and wear soon makes them bulge, ripple, and sag.

Next to consider are the seams. Are the seams too bulky where wear comes? Thick ridges on sleeve seams or under the arms may cause the material to wear through on these lines. Inspect the inside as well as the outside of every important seam and beware of those that are cut too closely. See if the stitching runs off or fails to catch through folds that have been turned under and which are supposed to be caught in the stitching. Also note the number of stitches to the inch. Thick stuffs require about 14 stitches; sheer silks and similar

materials about 16. Stitches that are too long cheapen the appearance and spoil the serviceability of the garment.

Watch the kind of thread used. Cotton and linens are machine stitched with cotton. High-class woollens are stitched with silk. Ordinary woollens are stitched with cotton for the seams and silk for outside stitching. Velvets, silks, and other fine fabrics are stitched with silk.

Simplicity in trimming is more desirable than elaborate trimming. Button trimmings should be placed near two parts of a garment supposed to be fastened together. A small bit of hand embroidery is better than machine embroidery.

Tightly woven braid will last longer than loose braid. Beads should be secured on very carefully and tightly, because once they begin to fall off the costume looks shabby.

Fit.—If your coat has passed all these rigid tests for style, beauty, and workmanship, you have only one problem left to consider. Does it fit comfortably? Are your shoulders in the right place, does the waistline of the coat coincide with your normal waistline, and is the length right for you? These are the three salient points. Minor details like shortening sleeves or moving buttons are easy to remedy. But if the shoulders are too short or the waistline too high or your length much too short, the coat will never be fitted satisfactorily. Be sure your coat will fit comfortably over both wool and silk dresses. Remember you must live in this coat for quite a while and it must be right or you will regret your purchase.

Setting Standards for Selection.—As a guide to future purchases, you might write a description of the coat you bought with an explanation of why you bought it under the main headings of:

- I. Style
- II. Becomingness
- III. Durability
 - Quality
 - Workmanship
 - Cut and fit

From month to month, you might add to this report your observations as to whether you chose the correct style, how the fabric wore, did the garment hold its shape, did it clean satisfactorily?

Now you have a formula, a set of standards by which you should be able, with the exercise of your own individual judgment, to select your clothes wisely and well. Price has not been included in your standards because it is usually a fixed thing. You have \$20.00 to spend or you have \$50.00—no more, no less. The important thing to learn is how to get the most value from the money you can spend. A girl can be well-dressed on a very small clothes allowance—and very badly dressed on an unlimited income. The secret is a knowledge of clothes, style, and fabric qualities. While the price you can pay, therefore, may be arbitrary, your success can be boundless.

Let us apply our set of standards to the purchase of a dress. A coat costs a lot of money and it is a little easier to be practical in the matter of coats than with dresses. Let us imagine we are about to buy a dress to wear to church, to tea, to concerts, or to parties. It is to be an occasional dress—we shall only wear it for special events. In the wardrobe closet is a green crepe dress, a beige, brown printed silk, and a flaming orange dull crepe. We must still think of the brown accessories and, of course, of the brown coat we are to wear over it. Let us look for a gold or one of the new blended shades that are so fashionable. Now we are armed with the type of dress we want and the colors we should have.

Figure and Type.—Take a long look in a full-length mirror and note again your general build, as you did when you studied "Personality and Personal Appearance." Remember each year your shape may change—you will fill out here or lose weight there, and you may grow taller. Think of your own figure in comparison with the fashion silhouette this year. For example, the ideal fashion figure at the present time demands broad shoulders, full bust, concave diaphragm, small waist and smooth rounded hips. How do you compare? How can you conceal, for example, narrow shoulders, too broad hips, or a

flat chest? The expertly styled dress can do any of these things for you to some extent. In the first place—**narrow** shoulders can be padded and extended in the cut of the **sleeve**. The extension or emphasis of the shoulder line also helps by contrast to diminish the hips. A smoothly fitted, slightly-flared skirt is good for broad hips. A bodice draped or shirred gives the illusion of a fuller bustline. Decide first what your defects are and then plan to conceal them in your choice of a **dress**.

What are your good points? A slender waistline? Emphasize it with a wide colorful sash. A pair of beautiful blue eyes? Wear blue and wear it as much as you can. People will never tire of seeing you in a becoming color. Try all shades. It is an interesting experiment to try all shades of colors and color combinations on yourself. You will be surprised to find you can wear many colors in combination that you could never wear alone. Two-tone color harmonies have been an unwritten fashion edict for many years. Recently, however, it has become smart to wear three colors—exercising good taste and restraint in their combination, however. Usually two bright or light colors and one dark—such as bright green, dull orange and brown, or rosy pink, dull blue, and wine red. Collect fabrics of various colors and experiment before a mirror. You may have a color sense you never suspected. At any rate, it should develop your individuality in dress to make this study of colors for yourself.

Review of Materials—Silks.—Now that you have analyzed the style and color you want in your afternoon dress, you are back to the fundamental question. The question of practicability is before you. Not quite so pressing as in the case of a winter coat—but present all the same. You want to know definitely that the silk crepe in this dress will not disintegrate at its first dry-cleaning, that the seams will not shred, or pull out. Let us review carefully what we know about silks and rayons.

Good-quality silk dresses are made of “pure-dye” silks. When first used, this term meant that the silk has been dyed “pure,” that is without weighting, which is often used to give

body and an appearance of quality to silks. Later the term was used to describe silk containing varying amounts of weighting, such as metallic salts and substances that wash out. So much confusion resulted that finally the manufacturers and distributors defined "pure-dye" at a trade-practice conference held in 1932 under the auspices of the Federal Trade Commission. If a manufacturer lives up to the agreement that was made at this conference, he will make sure that all of his silks except blacks, with label "pure-dye," contain no more than 10% of substances other than silk and no metallic weighting. Black silk may contain as much as 15% of other fibers or substances and still be labeled as a "pure-dye." Under the same trade agreement, if the word silk is used, all fabrics containing more than silk should be labeled either as "weighted silks" or as a mixture, whatever it may be. This practice is intended to protect both the manufacturer of quality silks and the consumer, against cheap silks that compete unfairly with those honestly represented.

Metallic-weighted silks are often difficult to distinguish from pure-dyes unless you can test samples; but make observations, read labels, and ask questions. Usually heavily weighted silks are priced low in comparison with pure-dyes, and that is only right, because their value is less. Compare the feel and appearance of two pieces of the same type of fabric. For example, weighted flat crepes have more sheen, are heavier, and more slippery than pure-dyes; satins are hardly as pliable, and sheers feel more wiry and harsh when gathered up in your hand. Weighted silks cut along stitching lines and rub into shreds wherever there is friction—as under the arms, on the hips, and across the shoulders. They even split when simply hanging in a closet. Weighted silks are also more troublesome to care for than pure-dyes. Wrinkles cannot be pressed out without steam, and the colors are seldom dependable. As you wear weighted silks, they feel clammy next to the skin and are uncomfortably warm in hot weather.

Weave is another point to examine when buying a silk dress. You want a weave that is firm and not likely to shift

and cause ugly pulling at seams or bulges across the shoulders, under the arms, and at the hips.

Shrinkage and stretching are two more points to ask about when buying a silk dress. Very crinkly crepes often stretch; those made from lightly twisted yarns sometimes draw up. Dresses made of fabrics with a close, regular weave are much more likely to hold their shape.

Also, with tub silks especially, be sure the colors are fast not only to washing but also to sunshine and perspiration. The label "washable" commonly found on silk dresses means only that the silk can be washed. It is no assurance that the colors are fast or that the material will not shrink. If there is no label to give definite information about these qualities, ask the store for a statement.

Read everything on a dress label, taking care not to overlook small printing. Sometimes it gives the information that is of most importance to you. And now that the term "pure-dye" is being applied to unweighted rayons as well as to silks, do not take for granted that "pure-dye" means silk unless the word "silk" is there. If a label informs you that the material in a dress is made of a certain brand of yarn and you do not know whether it is a silk or rayon, ask the store to tell you. If the clerk does not know, ask to see the buyer; you are entitled to this information.

Rayon and Other Synthetic Fabrics.—At first, fabrics made of synthetic fibers were called artificial silks, but this was so misleading that a few years ago a group of manufacturers and distributors asked that a new term, "rayon," be used. A few companies making what is called the cellulose-acetate type of synthetic fiber would not adopt this term and used the trade names of their products instead. Now many manufacturers even of other kinds are doing the same and we have such a confusing array of names that often neither the clerk nor the customer knows of what fiber the material is made.

All such synthetic fibers are produced by one of four chemical processes from wood pulp or cotton linters. Some are made to look like silk, others like wool, but all have similar

properties just as all silks or all cottons do. The way the fiber is made and the finish of the fabric make a difference in its strength and durability. Some rayons are weak when wet and must be washed carefully. Cellulose-acetate fabrics have to be pressed cautiously. Under a hot iron they sometimes stick or even melt.

The yarns in all of these fabrics, as in the silks and wools they resemble, need to be well twisted, then woven so there can be no slipping, fuzzing, or fraying. Many cheap rayons are made of stiff, unwieldy yarns that pull out at seams and snag easily on the surface. Others are adulterated, such as some silks, with substances that give the impression of good quality. Choose well-made fabrics of good-quality yarns; then care for them as their characteristics require. In good qualities, fabrics made of synthetic fibers are serviceable and attractive in dresses; and many of the desirable qualities of silks and wools can be had at comparatively low cost. The colors and effects may even surpass, at times, those found in fabrics made of natural fibers.

Unfortunately, labeling that gives the information you really need is generally lacking. Clerks are known to sell unlabeled dresses of synthetic fibers as silks; then troubles that might well be avoided by informative labeling come with pressing or cleaning. When you buy, insist on knowing exactly what you are buying and how it should be cared for. Honest, definite information is the best guide to both wise purchasing and wise selling.

Durable, Well-Finished Seams, etc.—A good-quality dress has no more seams than are really needed for good fit and for working out the particular design. A much-flared or bias-cut skirt may need to have a few extra pickings, but these are always as few as possible and are made neatly so as to be inconspicuous. Should you notice any other seams that are apparently useless, such as one up the center front of a waist under some meaningless frill, you may be certain that left-over pieces were used to cheapen production costs. Even though these extra seams may be durable, your dress will

neither look as well nor be as easy to care for as it would have been otherwise. If circumstances force you to consider one of these "bargain" dresses and you are deciding whether it will meet your needs provided you can dispense with some of the extra frills and furbelows, examine carefully before you buy. More than likely those frills cover up some surprise seams, and your make-over plans will not work.

Sleeves should be set to allow for seams. The edges of seams should contain enough material to prevent their pulling out and all edges must be pinked, picoted, or overcast.

Buttonholes should be fully stitched and finished. On more expensive garments all this stitching is, of course, hand work, and in every garment self-colored thread must be used.

Experience shows that poor workmanship cannot be covered up with any superficial veneer of trimmings or novelty effects. The garment must have qualities put into it with shears and needle, and not defects covered up by fancy trimmings and the use of a pressing iron.

While the costume is suspended from a hanger in a good light, notice the back and front for flaws in the material—drawn threads, cuts, soiled spots, etc. The hems of the dresses should be basted, not stitched, so that changes in length may be made easily.

Accessories.—Now let us buy our accessories. Our hat, gloves, bag, shoes, and jewelry. The same set of standards covers our purchase of accessories. We must look for style, becomingness, and durability the same as we did in coats and dresses. In the very act of being put on and taken off, a hat goes through a great deal of wear. It must, therefore, be of a good quality felt and its stitching must be firm and close. Since it frames the face, the focal point of the body, a great deal of thought must be given to its style. You must study the shape of your face; the way your hair grows, the height of your forehead, etc., the same as you studied your figure to determine what lines conceal your defects and emphasize your charms. For instance, a girl with a high, rounded forehead should never wear an off-the-face brim. Nor should a girl

with a low forehead wear a low jutting brim. In the first case, the appearance will be all face and no hat; in the second, all hat and no face.

GLOVES.—If you have large hands, you will buy monotone sleekly fitting gloves and not allow yourself to be tempted with tricky conspicuous styles. From the practical viewpoint, if you buy brown or black, you should make sure the color is fast. Dark suedes, in particular, are likely to rub off on your dress. In light-colored sport gloves or evening gloves you should demand a fabric that will wash easily or at least dry-clean well. Beautiful, inexpensive, colored fabric gloves are now on the market that launder very well. The stitching and seaming of gloves is one of the most important things to watch. Cheap gloves are many times badly put together and will rip out after a few wearings. Be careful also of the fit of your gloves—gloves that are too tight pull out very easily.

BAGS.—These are very much a matter of choice and personality. There is almost nothing you can buy which expresses your personality as much as a handbag. It can be somber and practical, or gay and ridiculous. Its only requirement is that it should harmonize with your ensemble and carry your handkerchief, vanity, and money safely. However, if you are a big girl, you should carry a fairly large bag. Likewise, a little girl should use a smaller bag.

SHOES.—We cannot go into much detail in this chapter regarding shoes. Suffice it to say that in this isolated instance, style and becomingness should be sacrificed to comfort. Badly-fitted shoes do incalculable harm to health and eventually to your carriage and disposition. After comfort, style and beauty of the shoe in relation to the shape of your foot and leg should be considered. A large foot should wear a simple inconspicuous style of shoe. You must remember, too, that if you are short, a high-cut or fussy shoe will make you look shorter.

JEWELRY.—As for jewelry, our standards can be waived. This we buy for fun! The beautiful array of costume jewelry

on the market today can enhance last year's dress and give added life and zest to our new garments. It should be chosen, of course, with this in mind. It would be stupid to spend our money on a necklace with green stones in it, for instance, when it is our blue dress that so badly needs help this year. But, all in all, we may be permitted to indulge ourselves here without going far wrong. The all-gold and all-silver jewelry lends charm to almost any ensemble.

Conclusion and Summary.—No matter what we purchase, our first consideration must be its *purpose*. What sort of dress do we want? What use must it serve in our wardrobe? Where are we going to wear it and how often? Secondly, we take inventory of our clothes and find out what accessories, coats, etc., we have to wear with it. Armed with this information we set out to the stores. At this point, let us be advised. Shop at reliable stores which have a name for honesty and prestige. The slightly higher prices of these stores must be regarded as your own personal insurance against bad buys and faulty merchandise. These stores will back up their merchandise and make good to you the clothes you bought which were unsatisfactory. If, for example, a printed dress "runs" on its first dry-cleaning when the label on the dress said "pure-dye fast silk" the store will either refund your money or give you a new dress. The policy of a reliable store is to satisfy its customers. It strives to give them a certain guaranteed quality at a certain price. The risks it takes to do this, plus the additional overhead, mean higher prices, but it is well worth the difference.

Once in your favorite store, you will look for a style which is simple but fashionable—and above all becoming. Then you will study the garment for fabric durability, for the quality of its workmanship, cut, seams, trimmings. When you try it on, you will be careful to notice its fit and have the necessary alterations made. If your dress passes these critical standards and still falls within the price you want to pay, you have made an intelligent buy and should expect a reasonable satisfaction from your purchase.

Activity

List three articles of clothing bought within the last year. Try to remember how many of the standards you have just learned were satisfied in the purchase of these three things. What sort of wear have you had out of these articles?

QUESTIONS

1. (a) Explain what is meant by standards. (b) Of what value are standards in buying ready-to-wear garments?

2. List the most important standards to keep in mind when buying ready-to-wear garments.

3. Show why the following factors should influence the selection and purchase of garments: (a) style, (b) becomingness, (c) beauty, (d) durability, (e) quality, (f) cut and fit, (g) workmanship, (h) comfort, and (i) price.

4. Why is the consideration of style so important in the selection of costumes?

5. Do you consider style of more importance than becomingness in dress?

6. Explain the necessity for care in selecting durable colors for clothing.

7. Why is serviceability an important factor in selection of coats and dresses?

8. (a) What do you mean by conservative dress? (b) State its importance for many people.

9. How may a costume and all of its accessories be judged effectively.

10. List the points for determining quality in: (a) cotton fabrics, (b) silk fabrics, (c) wool fabrics.

11. Describe the points that determine good workmanship in a garment.

12. (a) What is meant by the cut of a garment? (b) Show by illustrations what effect the cut would have on serviceability of garments.

13. Is it practical for one to order ready-made garments by size? Give your reasons.

14. What determines whether a garment has maximum value to a purchaser?

15. Explain the points, under style and becomingness, which must be kept in mind when purchasing: (a) hats, (b) gloves, (c) bags, (d) shoes.

16. Can we safely waive all standards in purchasing jewelry for our ensembles?

REFERENCES

- Baker, Lillian C. W. Clothing Selection and Purchase. The Macmillan Co.
- Buttrick, Helen G. Principles of Clothing Selection. The Macmillan Co.
- Goldstein, Harriet and Vetta. Art in Everyday Life. The Macmillan Co.
- Hempstead, Laurene. Color and Line in Dress. Prentice-Hall, Inc.
- Rathbone, Lucy, and Tarpley, Elizabeth. Fabrics and Dress. Houghton Mifflin Co.
- Rittenhouse, Anne. The Well-Dressed Woman. Harper & Bros.
- Story, Margaret. Individuality and Clothes. Funk & Wagnalls Co.
- Story, Margaret. How to Dress Well. Funk & Wagnalls Co.
- Trilling, Mabel B., and Williams, Florence. Art in Home and Clothing. J. B. Lippincott Co.

CHAPTER 15

PRINCIPLES OF MAKING A CLOTHING BUDGET

How many girls in high school have any idea of the amount of money required to keep them in high school for one year? It is sometimes difficult for girls and boys who have not yet learned the value of money to realize that an income cannot be stretched indefinitely, or that there is a limited amount of money available in each family for all the necessities of life, such as shelter, food, clothing, as well as the development of a more satisfactory family life.

In all systematic planning or budgeting whether by government, a business, or an individual, there are certain rather definite values resulting to everyone. In order successfully to apportion any allowance which we may have, no matter how small, it is necessary for us to learn the basic principles that apply to systematic planning and to use those principles in our everyday life.

Since clothing and its cost is, in most cases, an important element in our everyday existence, in order to realize what budgeting means and the benefits that can be derived from planning before spending, we will apply the basic principles of budgeting to our clothing allowance, leaving the more intricate apportionment of family income for later discussion.

Values.—The chief values of a definite plan for a clothing budget, whether the portion of the income available for the purchase of clothing is limited or not, are:

1. Intelligent planning, and carrying out that which we plan, will enable us to get better value for the money expended than would be possible by haphazard spending.
2. We will also find that the results of purchasing by systematic planning will insure more time and thought being given to the consideration of relative values in the intended purchases. This will

result in the selection of clothing better adapted to individual needs, and it will tend toward making us eliminate non-essentials. It will also aid us in keeping our expenditures within our allowance.

3. A definite plan for clothing expenditures will save time, money, and energy because we will know just how much we have to spend for each item in our budget.

Individual Need Controls Plans and Spending.—In all our systematic planning of either time or income we must recognize the fact that the apportionment for individuals or families cannot be applied to other individuals or families, for it must always remain a personal or family problem. Each individual or family budget will vary depending upon many factors which must always be considered.

While the basic principles are the same for all budgets, the personal desires and needs must control and modify each family, personal, clothing, or food plan of spending. A budget, therefore, to be successful in planning and in carrying out the planning, must be elastic enough to be readily adapted to individual or family needs. It must also be planned in such a way that it can be adjusted to meet needs, emergencies, and changes in social and economic conditions as they occur.

Basic Factors.—There are certain basic conditions which to a certain extent influence the spending problems of the family. It will be necessary for us to understand and evaluate these influences in order to determine how much of the income can be used for the purchase of the clothing of the entire family. In addition, we must be able to determine the share of the family apportionment we may expect to receive as a member of that family.

The experiences of other people in spending their incomes will help us to spend our income efficiently. This information may be obtained from budgets which have been prepared by experts and from the results of the careful investigations that have been made by the United States Government, and other authorities, with regard to the income and expenditures of many families in various stations of life. From these investigations we may summarize the proportion or division of the

income spent for different items, such as (a) food, (b) shelter and rent, (c) clothing, (d) fuel and light, (e) recreations, and (f) savings. Further investigation also shows the part or division of income spent by each member of the family. The following tables have been taken from such reports.

Division of Income.—The minimum standard of living would be: (1) the standard of the unskilled worker, whose income would be about \$800-\$1,500; (2) for skilled workers, skilled mechanics, clerical and business employees, \$1,900-\$2,500; (3) average professional workers, proprietors, and important executives, \$2,500-\$5,000; (4) advanced professional workers, proprietors, and executives, \$5,000-\$20,000.

PROPORTION OF INCOME SPENT IN DIFFERENT INCOME LEVELS

	I	II	III	IV
Food	36%	32%	20%	17%
Shelter	25	25	24	25
Clothing	16	18	20	15
Fuel, light, maintenance, etc.	10	10	15	15
Recreation	10	10	14	13
Savings	3	5	7	15

Experience and observations of the spending of money show that between 10% and 21% of the entire income is spent for clothing. The basis for determining the amount to be apportioned for clothing of the family depends upon the following factors:

1. Divisions of income.
2. Standards of family.
3. Social activity of members of the family.
4. Number in family.
5. Care in the use, repair, and cleaning of clothing.
6. Special abilities, such as ability to purchase with discrimination and good taste, skill in the techniques of dressmaking, and in the use of materials and articles readily available.

1. **DIVISIONS OF THE FAMILY INCOME.**—If the income is small, the necessities must come first, and then the allotment for clothing will be correspondingly small.

Percentage of Total Income Allowed for Clothing.—Class I with an income of \$1,500 must confine the purchase of clothing to what is absolutely necessary and with little regard for style. Considerable effort must be devoted to the making, repairing, and remodeling of garments. The amount for each member of the family would be apportioned as follows:

Income, \$1,500: amount for clothing, 16% = \$240. Of this amount:

\$70 would be for the man (father)
\$60 would be for the woman (mother)
\$45 would be for the child of 16
\$35 would be for the child of 12
\$30 would be for the child of 5

To illustrate: 1. What per cent of the total income would be apportioned to each member of the family?

2. Why should the amount or proportion for the father be more than that allowed for the mother?

Class II income allows for more attractive clothes and for a greater variety of clothes than Class I income. Considerable repair and remaking are necessary for a family living on this scale. The amount for each member of a family of five whose income is \$2,200 would be as follows:

Income, \$2,200: amount for clothing, 18% = \$396. Of this amount:

\$103 would be for the man (father)
\$118 would be for the woman (mother)
\$65 would be for the child of 16
\$60 would be for the child of 13
\$50 would be for the child of 6

To illustrate: 1. What per cent of the total income would be apportioned to each member of the family?

2. Why should the proportion for clothing for women be more than that for men in Class II income?

In some cases one or more members of the family may require, temporarily, a larger proportion of the clothing allowance than is allotted, thus compelling other members to dress below their income in order that those members may have the

additional allowance to meet their need for fashionable clothing.

Class III income would allow for excellent qualities of clothing, both in regard to durability and style. The selection should be made so as not to include extremes in styles. The better the quality of clothing, the less sewing and repairing required.

The amount for each member of the family of five with an income of \$4,000 would be as follows:

Income, \$4,000: amount for clothing, 20% = \$800. Of this amount:

\$200 would be for the man (father)
\$250 would be for the woman (wife)
\$150 would be for the child of 15
\$110 would be for the child of 12
\$90 would be for the child of 8

To illustrate: What per cent of the total income would be apportioned to each member of the family?

2. STANDARDS OF LIVING AND SCALE OF LIVING.—What do we mean by "Standards of Living" and how does the "scale of living" affect our standards of living? Our scale of living is determined and limited by our income, while our standard of living is determined by the satisfactions we get and the use we make of our material possessions. Our attitude of mind and our attitude toward life in general control our standard of living. One family with an expensive car, more material possessions, struggling to keep up with its neighbors may not get the greatest amount of satisfaction from the life it leads, as a family with more meager possessions but a happier outlook on life.

Our standard of living is usually acquired from the home in which we spend our childhood. Ways of thinking in regard to our material possessions are formed, and this is sure to have an effect on the satisfactions we get from our surroundings throughout life. Most of us try to maintain those standards regardless of the ups and downs of the scale of living forced upon us by social or economic conditions. Experience shows

that the standard of living is fairly constant for each person, family, or class, due to the fact that every one through pride will try by sacrifice and practice to sustain it.

Since we feel compelled to dress in about the style that our associates expect us to, our clothing standards are intended to provide a fair degree of that mental satisfaction which follows being reasonably well dressed.

3. SOCIAL POSITION.—The social position of the family which to a great extent determines the social activities of the members of the family will influence not only the division of the income, but also the personal needs of the individual members of the family to meet their social obligations, because expenditure of money for clothing depends upon the life one leads, his or her working hours, the society in which he or she mingles, and the type of clothes he or she will most often use. One who expects to have leisure time may wish to concentrate more on informal than formal clothes. In the nineties one had his home or working clothes, an everyday suit and a Sunday costume or suit, and an evening gown or a full dress suit. Today one can have a costume for practically every occasion, and therefore more thought is given to providing a wardrobe adequate for all activities.

4. SIZE OF FAMILY.—The number of people who must share in the clothing allowance has been shown above in considering the summaries of authorities. It is sometimes necessary to adjust the clothing allowance among the members of the family in order that the needs of one member may be met temporarily or sometimes for a justified emergency. *To illustrate:* For a girl just entering business it might be necessary for other members of the family to sacrifice, in order that she may be more appropriately clothed for a business position.

5. CARE IN USE, REPAIR, AND CLEANING OF CLOTHING.—Some families and members of families are more careful in the use of clothing and in its daily care, brushing, airing, hanging, and mending of garments—and thus their clothing allowance can be made to extend further than one who is careless and

constantly in need of replacing garments ruined through carelessness. Then, again, the care that is exercised in the prevention of soil, attacks of moths, and proper cleansing of garments and accessories will help lower the cost of expenditure for clothing.

6. SPECIAL ABILITIES.—Certain members of the family may have creative ability which will enable them to add attractive touches or devices to their clothing to make them appear different and thus add to their length of service, as well as to give more variety to the wardrobe. Then, again, a girl can often have more suitably planned dresses if the mother, the girl, or some member of the family can sew.

Sometimes some member of the family is an expert buyer, recognizes value, and has imagination and good taste in purchasing fabrics, garments, and accessories. This special ability would aid in reducing the clothing cost, and it would enable the family to be better dressed on a limited income than they would be otherwise.

The Basis of a Clothing Plan.—In preparing a clothing budget, we must consider the use of conservative clothing, as this will last for several seasons. We may also distribute the budget over several years.

SPREAD OVER YEARS.—It is necessary in selecting and planning a clothing budget, for economy, to decide whether a one-year, two-year, or three-year plan will best fit your needs.

In using the *one-year plan* a complete wardrobe is purchased every year. This is adapted to growing girls or those people who find it wise to have fewer clothes and to wear them constantly.

The *two-year plan* provides that the majority of the garments are bought in alternate years' planning, so that those garments expensive to purchase are used for two years. This plan is satisfactory for one of limited means, and it gives an opportunity for the purchase of clothing of better quality than would be possible otherwise.

With the *three-year plan*, more expensive clothing can be

purchased, but this clothing must be worn for three years. This plan is adapted to the older woman who dresses in a more conservative fashion, and also to one who is not hard on her clothes. It presupposes quality rather than quantity. The garments of better quality last longer and present a better appearance. If the budget is planned carefully, there will be enough variety in the wardrobe. This may be accomplished by careful spreading of the allowance and alternating of garments. In this way enough new garments can be purchased each year to assure an up-to-date appearance at all times. Some articles in any wardrobe will need to be replenished every year; others will last two or three years. Of course, the clothing that is expected to last two or three years should be of a conservative type.

CONSERVATIVE DRESS.—If we glance over the fashion magazines, we shall find that the shape or general outline which we call silhouette will change little from season to season. On the other hand, we shall find that the details change greatly, and it is in this respect that the clothes of one season may look queer, or old-fashioned or out of style in the new season.

Since this is true, it follows that, if we expect to purchase a costume that is supposed to last several seasons, we must select conservative styles, that is, styles which will not change very much for two or three years.

A good serviceable costume will look well for three years, provided it is not extreme in style—that is, not too long, too short, too tight, or too loose. Variety may be secured by change of collar, tie, beads, and scarf. The costume should follow the tendencies of the time, but not the novelties.

Determining the Cost of Clothing for a Year.—The methods in common use, by which systematic plans for the spending of the clothing allowance may be successfully started, are:

1. After an inventory of your belongings has been made, make an estimate of what your clothing has cost during the past year. In

order to do this, list every garment you bought during the past year, giving its cost. If you do not know the purchase price, estimate from the prevailing price—or perhaps your mother can tell you. Estimate your miscellaneous purchases, such as toilet articles, as accurately as you can. Add the cost of all your purchases.

2. Begin today to keep an accurate record of all your clothing purchases for the current year. At the end of that time add up your costs. Analyze your purchases, prices, and your apportionment among the items listed, to find out wherein you have spent your allowance wisely or unwisely, then make: (1) an estimate of what you should spend, or (2) a reapportionment of your allowance to better fit your needs.

3. With typical budgets, prepared by investigators of this problem, such as the United States Government, State departments, social agencies, banks, or the research departments of state universities as your guide, estimate your individual needs.

4. By estimating your individual clothing needs list prices of each article, then add up the costs. This will form a basis for starting your plans for budgeting.

Steps in Making a Clothing Budget.—It is necessary to have the following information for planning a clothing budget:

1. Know the share of the clothing allowance a girl may reasonably expect to have for herself.
2. Since few of us ever start out to buy a complete outfit of clothing all at one time, the first step in planning and assembling a wardrobe should be to look over the clothes we already have on hand and make an inventory of the wardrobe before planning to buy, in order to know what is on hand before deciding what is really needed.

Taking stock of your present wardrobe before making new purchases may have several advantages. Sometimes you will find that you have not been making the most of the clothing you already have. Materials or garments which have been laid away in bureau drawers, boxes, or closets and forgotten often come to light. After going over your clothes, you should have definitely in mind the colors and designs of those garments you expect to continue to use. Thus you will be able to plan for new clothes that will fit in with them.

Consult Chapter 2 for details in taking inventory and planning for needs. A comprehensive list is given to aid in listing needs on pages 38-39. We now review the points to consider in listing the garments and articles on hand:

1. Those which can be worn in their present condition for another season. Put them in shape for wearing by the necessary processes of cleaning and pressing.
2. Articles that are usable. Look for possibilities of remodeling for yourself or a younger member of the family.
3. Give away those articles of clothing which still have wear in them, but are not suitable for any one in your own family.
4. Discard those garments that are of no further use as wearing apparel. They may be used for crocheted or hooked rugs.

You are now ready to estimate your needs and decide what must be bought during the year. (Consult page 37.)

A high-school girl takes an inventory and finds the following. What suggestions can you make as to new purchases?

CLOTHING EXPENDITURE FOR A HIGH-SCHOOL GIRL

Articles	On Hand	Needed	Approximate Cost
Coat.....	3 { winter spring rain	3	\$51.00
Hat.....	2	3	15.00
Gloves.....	1	1	4.00
Stockings.....	4	4	8.00
Sets underwear.....	4	2	12.00
Slips.....	4	2	6.00
Dresses.....	5	3	40.00
Blouses.....	2	...	2.00
Skirts.....	1	...	1.00
Sweaters.....	1	1	4.00
Gym. middies.....	3	1	3.00
Gym. bloomers.....	1	...	1.50
Gym. shoes.....	1	...	.85
Pocketbooks.....	1	1	3.00
Galoshes.....	1	1	3.00
			\$154.35

CLOTHING RECORD OR WORK SHEET

Percentage	Articles	Total Allowed		Clothing on Hand			Clothing to be Purchased			Probable Length of Service
		No.	Price	No.	Article	Cost	No.	Article	Cost	
40% to 50%	Coats:									
	Winter									
	Spring									
	Suits:									
	Winter									
	Spring									
	Dresses:									
	Summer									
	Home									
	Sports									
	Afternoon									
	Informal									
	Formal									
	Hats:									
	Winter									
	Summer									
	Footwear:									
	Sports									
	Afternoon									
	Gloves:									
	Evening									
	Sports									
	Undergarments									
	Hosiery									
	Blouses									
	Skirts									
	Sweaters									
	Accessories									
	Total									

Division of Individual Clothing Budget.—It has been customary for those interested in systematic planning to apportion their clothing allowance under separate divisions. Of the percentages set forth by the Department of Agriculture the following apportionments have been made:

- 70% outer clothing (coats, suits, sweaters, dresses, blouses, trousers, hats, caps, footwear, furs)
- 20% underclothing (underwear, girdles, brassières, slips, garters, nightdresses, bathrobes, etc.)
- 5% accessories (collars, cuffs, ties, handkerchiefs, scarfs, veils, umbrellas, etc.)
- 5% care and repairs (laundry, renovations, etc.)

Another suggested division as worked out by a class in senior high school which met their needs:

- 55% outer clothing (coats, dresses, sweaters, skirts, blouses)
- 15% foundation clothing (shirts, shorts, bloomers, step-ins, pajamas, slips, nightdresses, hosiery, bathing suits)
- 10% shoes (rubbers, zippers)
- 10% accessories (hats, gloves, scarfs, handkerchiefs, jewelry, beads, belts, pocketbooks)
- 5% miscellaneous (cleaning and renovation, cosmetics)

Typical Budget for Help in Planning.—The following budget, which combines home-sewn garments with ready-mades, was planned by the National Needlecraft Bureau to fit the needs of the student, the business girl, or the young homemaker within the \$1,200 to \$1,400 family income level. The cost of garments made at home includes patterns and all findings. Checks in both the "Bought" and "Made" columns indicate the need of choices depending upon values available in ready-mades. The total value of the wardrobe is estimated at \$125. Of this amount, \$50 is the value credited to clothes held over from previous years, and \$75 is the amount allowed for new purchases. All estimated expenditures are based on data

secured from consumer purchase studies made by the government and well-known business organizations.

For Success in Keeping a Budget.—Every budget to be certain of success must build upon these two important principles: good planning or organization of items, and careful and accurate keeping of budget.

Account Forms.—Since it would be exceedingly difficult for us to keep in mind the expenditures for various items in our clothing budget over an extended period of time, we would find it an advantage to work out a simple method of keeping account of each item at or soon after its purchase.

It is not necessary to have an intricate system of keeping account of expenditures, nor would it be wise to make it a burden to keep such records. The simpler the method of

ACCOUNT OF EXPENDITURES

Bought	Made	ITEM	EXISTING WARDROBE			BOUGHT NEW	
			Yrs. worn	Orig. cost	Annual cost	1940 cost	Yrs. worn
✓		cloth winter coat.....	3	\$39.95	\$13.32 10.00*		
✓		tailored 3-piece suit.....	..	..	..	\$25.00	2
✓	✓	plain wool skirt.....	2	3.70	1.85		
✓	✓	1 spun rayon blouse.....	..	..	..	1.00	1
✓	✓	1 cotton pique blouse.....	2	.70	.35		
✓	✓	cardigan sweater.....	2	3.95	1.98		
✓	✓	pullover.....	2	2.00	1.00		
✓	✓	wool basic dress.....	..	..	..	3.17	2
✓	✓	dressy dress for fall-winter.....	..	..	..	2.80	2
✓	✓	dressy dress for fall-winter.....	2	8.00	4.00 1.00*		
✓	✓	2 summer street dresses.....	..	..	..	3.50	2
✓	✓	2 cotton summer dresses.....	2	3.50	1.75		
✓	✓	housecoat, also serves as summer dressing gown.....	2	1.50	.75		
✓	✓	cotton evening gown.....	..	..	..	2.00	2
✓	✓	evening gown with jacket.....	2	4.80	2.40		
✓	✓	2 girdles @ \$2.00.....	..	..	..	4.00	1
✓	✓	3 bandeaux @ \$.50.....	..	..	..	1.50	1
✓	✓	4 pr. panties.....	..	..	..	.80	1
✓	✓	3 tailored slips.....	..	..	..	2.50	1
✓	✓	1 suit woolies for blizzards.....	2	1.50	.75		
✓	✓	3 pr. pajamas.....	..	..	..	2.55	1½
✓	✓	1 pr. pajamas, visiting best.....	2	2.20	1.10		

*Indicates charges for material or labor for revamping.

Bought	Made	ITEM	EXISTING WARDROBE			BOUGHT NEW	
			Yrs. worn	Orig. cost	Annual cost	1940 cost	Yrs. worn
✓	✓	wool flannel bathrobe	2	1.50	2.25		
✓		dressy hat for fall-winter .....	..	....	....	\$2.00	1
✓	✓	fabric turban for fall-winter .....	..	....	....	1.00	1
✓		beret	2	\$1.00	\$.50		
✓		spring "Easter" bonnet .....	..	....	....	2.00	1
	✓	2 tubbable turbans or kerchief hats .....	..	....	....	.50	1
✓		street shoes	2	1.00	2.00		
✓		dressy street shoes .....	..	....	....	1.00	1
✓		sport shoes	2	3.00	1.50		
✓		summer sandals .....	..	....	....	2.00	1
✓		evening slippers	2	3.00	1.50		
✓		galoshes	2	1.50	.75		
✓		bedroom slippers .....	..	....	....	1.00	1
✓		12 prs. silk hose .....	..	....	....	9.48	1
✓		2 pr. fabric gloves, fall-winter .....	..	....	....	1.20	1
✓	✓	1 pair yarn mittens	2	1.00	.50		
✓		2 pr. hot-weather gloves .....	..	....	....	1.00	1
✓		1 handbag leather .....	..	....	....	1.50	1
	✓	1 washable handbag .....	..	....	....	.50	1
✓		1 necklace	3	.75	.25		
✓		1 decorative pin, or clips	2	1.00	.50		
	✓	2 collar and cuff sets .....	..	....	....	none	
	✓	1 novelty belt made from scraps .....	..	....	....	....
				Totals	\$50.00	\$75.00	

keeping accounts, the more certain that they will be kept up to date, and the more enjoyable and worth while we will find the budget-keeping.

A graphic plan will enable us to review our expenditures systematically from month to month or year to year (frequently called audit) to see if the record is correct, and also to see wherein we have failed to get the utmost value for our money. The last step will assist us in preparing the new budget for the stipulated time, and assure us of a worthwhile wardrobe for the least expenditure of energy, time, and money.

A systematic plan does not mean a rigid plan or one that cannot be made to fit our own conditions and allowance.

Simple Types of Records for a Clothing Allowance.—The following is the simplest way of keeping a record of expenditures. It may be made on a card for keeping in a file or an envelope for reference.

Date	No.	Items	Amount
December 5	1	Sport Coat	\$12.00

Two other types of recording expenditures are given.

DRESS EXPENDITURES							
Clothing, shoes, hats, etc. Repair, cleaning, laundry, pressing.							
Items	Date	Amount		Items	Date	Amount	
.....
.....
.....
.....
.....
.....
.....

Clothing							
Name of Account.							
Allotment, \$.							
Articles	Purchases	Cost	First Year	Second Year	Third Year	Total	Remarks
.....
.....
.....
.....
.....
.....

Summary of Points in Systematic Planning.—Clothing and other wearing apparel should be selected very carefully by the consumer in terms of: (a) inventory of present clothing, (b) earning power, (c) social position, (d) business position, (e) the occasion or intended use for the wearing apparel.

There are times when it is economical to purchase cheap clothing; there are other times when it is economical to purchase medium- or high-priced wearing apparel.

System is the keynote of economical dressing. It has been discovered that sane thrift is especially lacking in women's dress. It is obvious to all thinking people that economy in the purchase and upkeep of the wardrobe is possible only when the expenditure is controlled by a clothing budget. If the planning of clothing expenditures were more uniformly adopted, men and women would not only know how to spend well, but also how to dress well.

The advantages of a budget are:

1. It promotes saving. The passing desire for a certain article may have gone by the time the budget is adjusted to permit the purchase.
2. If one needs to count the cost of each garment, more thought is apt to be put upon the selection of clothing.
3. One shops with a definite aim, knowing exactly what one needs and how much one can spend.
4. It permits one to take advantage of true bargains by anticipating one's needs.
5. It prevents waste of money at so-called "bargain counters," and the buying of goods marked "at reduced price."
6. It will aid one to distinguish between "first-class quality" and high price, so that one will have a knowledge of the correct value of materials.
7. It will teach that economy does not mean getting the most for as little money as possible, regardless of the suitability or character of the goods.
8. The wardrobe is assembled more carefully, so that each costume is complete; that is, one buys things which can be worn together.
9. It saves time as well as money.

Because of the unlimited character of our wants in regard to clothing it is obviously impossible to purchase every piece of clothing desired.

QUESTIONS

1. Is the spending of the family income of sufficient importance to warrant special thought?

2. How is the amount of allowance for clothing, food, and shelter determined for each family?
3. Can you estimate the amount that it costs to send you to school for a year?
4. List some of the common sources of family income.
5. Explain the relation of the clothing budget to the whole budget.
6. Explain why it is necessary for us to systematically plan or budget our allowance for clothing.
7. Why is the systematic planning of a budget an individual problem?
8. Why is it necessary to have flexibility in our budget to provide for emergencies?
9. What are the causes of the variations in percentages of total income spent for clothing?
10. List the divisions of income that are commonly used for budget purposes.
11. What are the factors which determine how our allowance shall be apportioned?
12. Compare the meaning of the terms standards of living and scale of living.
13. Name some of the factors which determine the standard of living of a family.
14. Outline the steps in making a clothing budget.
15. Give a suggestive outline for listing your clothing for an inventory.
16. Suggest three methods in common use that may be used to start a clothing budget.
17. List the steps which should be taken in planning a clothing budget.
18. Explain the meaning and artistic value of conservative dress.
19. Tell how to determine what amount of the clothing allowance should be spent for different items.
20. How will a list of wearing apparel assist in selecting clothing for a wardrobe?
21. Analyze a budget that has been planned and criticize the items under each division.
22. State the factors which determine whether you will use the one-, two-, or three-year planning of your budget allowance.
23. Compare the values of using the one-, two-, or three-year budget plans.
24. Describe different account forms and state the necessity and value of each one.
25. Summarize the advantage of planning and using a budget.

REFERENCES

- Andrews, Benjamin R. Economics of the Household. The Macmillan Co.
- Baker, Lillian C. W. Clothing Selection and Purchase. The Macmillan Co.
- Baldwin, William H. The Shopping Book. The Macmillan Co.
- Dooley, William H. Clothing and Style. D. C. Heath & Co.
- Dooley, William H. Economics of Clothing. D. C. Heath & Co.
- Friend, Mata R. Earning and Spending the Family Income. D. Appleton-Century Co.
- McGowan, Ellen, and Waite, Charlotte A. Textiles and Clothing. The Macmillan Co.
- Nystrom, Paul. Economic Principles of Consumption. The Ronald Press Co.
- Trilling, Mabel B., and Williams, Florence. The Girl and Her Home. Houghton Mifflin Co.

INDEX

- Abdomen, prominent, alteration for, 163
Absorption, comparative property of, 250
Absorption power of fibers, 244
Abstract design, 230
Accessories,
bags, 32
care in selection and use, 219
choice of, 32-33
color harmonizing, 32-33
contrasting, 33
decorative use, 32
design in, 32-33
emphasis, used for, 32
evaluation of, 215
formal use, 32
harmonious with costume, 32-33
informal use, 32
jewelry, 33
matching, 33
purpose adapted to, 32, 217
restraint in selection, 32-33
selection of, 33, 219, 467
shapes of, 33
standards for buying, 480-482
styles, 33
tailored, 32
textures, 33
unity in ensemble, 33
used as accent, 33
useful purpose, 32
Account forms, types of, 497
Accuracy in measurement, 142
Acid dyes, 255
Adaptation of commercial patterns, 96-138, 436
Adding fullness and length to patterns, 116-122
Adjustable hemmer, use of, 275-278
Adulteration of fabrics, 62
Advancing colors, 26
Advertising, appeal of, 65
Aids in acquiring a professional appearance in dress construction, 146
Aimless shopping, 56
Allowance for clothing, factors influencing, 40
Allowance for growth of child, 361
Allowance of ease for proper fitting, 104
Alpaca, 247
Alteration of commercial patterns, 116-122
for figures that vary from normal, 116-122, 143
Alternate slip-stitching or seam basting, 158
Analysis of fabrics, 472
Analysis of fashion silhouettes, 7-13
Anatolian rugs, 336
Ancient fabrics, 317-319
Appearance, factors affecting, 145, 219 (See also "Lines")
Application of lace by machine, 278
Appreciation
of color in dress, 25-32
of line in dress, 3-25
Appropriate clothing, value of being prepared, 36
Areas, law of, defined, 28
Armenian lace, 93-94
Armscye, 128, 162, 166-168
Arrowhead tacks, 449-451
Art denim, 315
Art principles applied to dress, 12-25
Assembling garments, 155-160
Asymmetrical balance, 18
Attaching collars to neckline, 181-182
Attachments, use of, 268
Axis, center of, 18-20
Axminster rugs, 327-329, 331, 338
Baby bunting, 359
Baby clothes, 349-351 (See also "Clothes for baby")
Baby flannel, 391
Bags, 32, 481
Balance, 18, 20, 231

- Bands,
 - baby, 355
 - bias, 431-432
- Bar tacks, 449
- Bargains, 65, 68, 480
- Basic dyes, uses of, 255
- Basic principles in systematic planning, 485
- Basting stitches, 158, 408
- Bathrobe material suitable for baby, 358
- Batik, 238
- Batiste, 390
- Beads, decorative use of, 32
- Becomingness a standard for selection, 471
- Belt fabric, 159, 189, 190, 457-459
- Belting, inside, 457-460
- Bias,
 - bands, 431-432
 - binding on square neckline, 421-422
 - binding, V-shaped neckline, 421 commercial, 172
 - continuous, directions for cutting, 415
 - cutting gauge, 265
 - edges, 412
 - facing for necklines, 266, 415, 417, 421, 422
 - pinning to ironing board to fold edges, 414
 - strips, cutting, piecing, joining, 266, 412-413
- Bibs, 358
- Bigelow carpet, 325
- Bigelow, Erastus, 325
- Binder, use of, 305-306, 365, 369
- Bindings, 176, 197, 265, 305, 365, 369, 420
- Bird's-eye, 354, 390
- Bishop sleeves, 131, 140
- Blanket, baby, 359
- Blanket stitch, 434
- Bleaching, 236
- Blended yarns, 88
- Blind hemming, 407-408
- Blind loops, 195
- Block pattern (foundation), 97
- Block printing, 259
- Bloomers, 364, 376
- Blond type, 30
- Blouses, 466
- Bobbin lace, 92-93
- Body measurements, corresponding, 103
- Body structure, dress in harmony with, 8, 106, 113-115
- Boiled off silk, 84
- Bolero, effect of length, 16
- Bound and faced placket, 375
- Bound buttonholes, 375-377, 427, 429, 431, 442-444
- Bound plackets, 191-192
- Bound scallops by machine, 271
- Bound seams, 201-202
- Box plaits, 465
- Boys' clothing, 366
- Braids, types of, 271-273, 381, 430
- Brand names as buying guide, 61
- Broadloom rugs, 329, 331
- Brocatelle, 315
- Brushing, 46
- Brussels carpets, 331
- Budget, clothing,
 - principle of making, 497
 - systematic planning, 499-500
 - typical, 494
- Budget shops, 68
- Bureau of Standards, 102
- Burling, 331, 339, 344
- Buttonholes, 375, 427, 429, 431, 442
- Buying, 36-51, 54-73, 470
 - pattern, 96, 102, 141-145
- Cable stitch, 385, 386
- Camel's wool, 247
- Canton flannel, 354, 390
- Caps, babies', 359
- Carding, 251-252
- Carpets, 323-342
 - American, 324
- Cashmere, 315
- Cash payments, 59
- Center line of pattern, importance of marking, 145, 149
- Center of interest, 23-25
 - emphasis, 25
- Chain, 331 (See also "Warp")
- Chain stitch, 388, 389
- Chalk board, 153
- Chalked thread, 152-154
- Chalking seam lines, 154
- Chambray, 390
- Chambray effects, 312
- Characteristics of
 - fabrics, 261-262, 315
 - fibers, 249-251
- Charge accounts, 57-59
- Chasing, 237
- Checks, corded, 312
- Chenille cloth, 315

- Chenille rugs, 325-327
- Chest measurements, avoiding constricted appearance, 105, 112, 161
- Child care and training, 349
- Children's clothes,
 aids in training children, 393
 alteration of patterns, 116-122, 370
 amounts to wear, 349-350
 babies' bands, 355
 coats, 369
 colors, 351, 362, 363, 365
 coveralls, 362
 decoration of, 365
 design of fabrics, 365
 designs appropriate for boys, 366
 details in planning, 360
 devices helpful for training in independence, 361
 essentials, 352-354
 exposure of knees, dangers of, 368
 fabrics, 365
 fastenings, 362-366
 fitting children's shoes, 367
 handkerchiefs, 369
 hats, 369
 laundering qualities, 351, 354
 material to choose, 349-352
 mittens, 369
 overshoes and leggings, 368
 panties, 364
 recreation garments, 361
 shoes, 367
 slips, 365
 stockings, 368
 sun suits, 361
 sweaters, 369
 trousers, 367
 undergarments, 368
- Chinese brocades, 229
- Chinese fabrics, influence of, 318
- Choice of
 clothes, general suggestions, 39
 fabrics for service, 473
- Chrysalis, chrysalides, 80-81
- Circular godets (See "Godets")
- Circular hems, 176
- Circular knitting, 76, 78 (See also "Knitting")
- Circular skirt, 122, 164
- Classes of dyes, relative costs, 256
- Classes of knitted fabrics, 78-79
- Classical designs, 12
- Classification of pattern sizes, 102
- Cleanliness, comparison of major fibers, 251
- Close fitted sleeves, 140
- Cloth loops, 197
- Clothes for the baby,
 baby bunting, 359
 bands, 355
 bathrobes, 358
 bibs, 358
 binders, 355
 blankets, 359
 caps, 359
 care of, 352, 392
 characteristics essential, 352-354
 colors adapted to, 358
 construction of, 360
 diapers, 354
 dresses, 356-357
 fabrics, choice of, 353
 gertrudes, slips, 356
 gowns, sleeping, 356
 kimonos, 358
 laundering of, 354
 layette number in, 359
 number and types of garments needed, 352
 pads, 359
 repair and care of, 352
 rompers, 357-358
 rubber pants, 358-359
 sacks, 358
 selection of, 352
 sheets, 359
 shirts, 355
 sleeping gowns, 358
 stockings, 358
 sweaters, 358
 workmanship on, 353
- Clothing,
 accessories, 32, 467
 allowance, simple types for recording, 498
 budget, individual, division of, 496
 budgets, basis for apportionment, 487-491
 budgets, basis for plan, 490-491
 budgets, principles in making, 485
 care of, 41, 46
 cost of, 492
 discarded, use of, 36
 expenditure, factors determining amount, 486
 needs, affected by standards of living, 486

- Clothing—*Continued*
 needs, analysis, 36
 plan, basis of, 491
 principles of selection, 47-51
 purchase plan, 485
 record or work sheet, 495
 remodelling of, 36, 224
- Cluny lacc, 93
- Coats, construction of, 434-455
 children's, 369
 jackets, 16
 length of, effects on figure, 16
- Cocoons, 80
- Code of ethics for shopper, 55-62
- Collars, 109, 139, 431, 450-452
 classification of, 140, 180
- Color,
 analogous, 28
 analysis of, 25, 26
 appreciation, 26
 balance, 27
 becoming, determination of, 30
 becomingness in dress to the
 baby, 358
 children's dress, 351, 362, 363,
 365
 choice of, 218
 cool, 26, 28
 design, 310, 365
 distribution of, 21
 dress, 25
 effects of artificial light on, 397
 effects on eye, 30
 effects on hair color, 31
 effects on skin tone, 29-30
 emphasis, 23
 fastness, 256, 257, 351
 harmonies, 21, 28, 29
 hue, 26
 importance in structural design,
 310, 311
 intensity, 27
 neutral, 27
 personal types, 29-31
 principles, 25
 psychological effect, 26
 receding, 26
 schemes, 21, 28
 suitability, 30
 theory, 26
- Coloring, analysis of individual,
 background, foreground, 29, 30
- Combing, 252
- Comfort, due to fit, 105, 170
- Commercial patterns,
 alteration of, 116-122
- Commercial patterns—*Continued*
 making, 98
 markings of, 143
 selection of, 142
 size to buy, importance of, 112
 study of, 401
 testing, 144-145
- Commercial plaiting, 289-292
- Commercial trimmings and braids,
 271-273, 381, 430
- Community influence on clothes,
 490
- Comparison of processes of finish-
 es, 172-189
- Comparison of
 textile fabrics, 6
 textile fibers, 87
- Competition, value of special bar-
 gain days, 66
- Complementary color schemes, 21,
 28
- Complexion, colors becoming to,
 30
- Complimentary lines, 113-115, 141
- Conservative dress, 492
- Construction,
 cloth, 74-95
 ensemble, 111, 139-212
 lines achieved by, 29, 113-115
- Consumers, 47
 cooperation with stores and
 salespeople, 55-61
- Continuous lap for cuffs, 188
- Continuous placket, 191, 192
- Contrast of area, 28
- Contrasting color schemes, 28-29
- Contrasting harmony, 20-21, 28-29
- Conventionalized design, 230
- Cool hues (colors), 26, 28
- Cooperation between buyers, sales-
 people, and consumers, 55-61
- Cording, 292
- Cording foot, use of, 292, 412
- Corduroy, 390
- Correct, width of fabric, import-
 ance of, 148
- Cost,
 advertising, 112
 clothing, to estimate, 492, 493
 patterns, 142
- Costume jewelry, 32, 33, 481-482
- Cotton fabrics, 232, 315, 318, 319,
 322
 dyeing, 257-258
 flannel, 390, 392
 wool mixtures, 253, 355, 472

- Couching, types of, 430-431
 Courtesies extended by stores, 57-63
 budget shops, 68
 charge accounts, 59
 delivery of merchandise, 58
 instalment buying, 60
 returns and exchanges, 58
 special services, 70-71
 Courtesy days, value of, 57, 71
 Cowl necks, 130, 426
 Crazy quilts, 235
 Crepe fabrics, stretching, shrinking, 50, 478
 dress, 390
 effects, 312
 Cretonne, 228, 315
 Crewel stitch, 234, 387, 388
 Crocheting, 76 (See also "Knitting")
 Cross-double overcasting, 434
 Cross dyeing (See "Dyeing")
 Cross-stitch, 433, 434
 Crosswise thread (grain), 144
 Crow's foot tack, 450-451
 Cuffs, 188, 452-454
 application of cuffs, 188-189
 effect of cuffs on figure, 12, 25
 Cultivated and wild silkworm, 80-81
 Curve of well-fitted neckline, 161
 Customers (See "Buyers," "Consumers," "Purchasers")
 Cut of dress, 48, 50, 51, 141, 146
 Cut pile, 327, 338
 Cutting out garments, 145, 150
 children's, 371
 hints for preparation of material, 147
 Czechoslovakian embroidery, 232
 Daisy cloth, 390
 Damask, silk, 315
 Darts,
 pinning, basting, stitching, 156, 437
 purpose of, 126
 skirt, waist, sleeves, 131
 Decoration,
 applied structural, 345
 development of, 346
 of fabrics by surfaced design, 227
 Decorative design used in dress, 6-8, 315
 Decorative evolution throughout, structural design, 310
 Decorative fabrics used for dress, 315
 Decorative finishes for garments, 425, 449
 Decorative stitches, 233, 429-434
 (See also "Embroidery")
 Defects in cloth, 344-345
 Degumming of silk, 84-85
 Deniers, 82
 Denim, 39, 390
 Department of Agriculture, clothing apportionment, 496
 Department stores, defined, 55
 Depositors' accounts, 71
 Design,
 adapting for use, 362
 ancient textiles, 315
 children's garments, 365
 choice of, 218
 class of, defined, 230
 comparative study of, 310
 decorative, 6-8
 defined, 229
 Empire, 9
 Middle Ages, 320
 modern, 9
 motifs used, 231
 primary elements of, 310-311
 principal elements underlying, 313-314
 requirements of a good design, 230-231
 structural, 6-8, 310-348
 surface, 6-8, 227-241
 textiles, 259, 310-323
 types of, 229
 Designer, requirements for success, 3
 Designing by draping, 99
 Designing, fashion artist, 100
 Detachable collars, 183, 184
 Details in planning clothing for children, 360
 Diapers, 354
 Dimitiv, 390
 Direct dyes, 255
 Discharge printing, 260
 Dotted Swiss, 390
 Double cloth weave, 313
 Double damask, defined, 67
 Douppions (double cocoons), 81
 Drafting, defined, 97
 Draperies, fabrics used for, 315
 Draping defined, 97

- Drawn thread work, 345-346
 Dress,
 distinctive and smart factors, 217-218
 modern influences, 323
 proportions in, 12-16
 relationship to human figure, 8
 Dress revue for establishing standards for evaluation, 215
 Dressmaker types of suits and coats, 435
 Dry goods, defined, 54
 Duplex printing, 228
 Durability a standard for selection of garments, 471-472
 Dyeing and printing, 237, 320
 Dyeing experiments,
 cotton, 257-258
 silk, 258
 wool, 257
 Dyes, classification of, 254-256

 Ecclesiastical embroideries, 232
 Economic level of customers, 67, 70
 Economy in selection of accessories, 467
 Edge finishes,
 cording, 292
 shell edge, 381, 382
 Edge-stitched seams, 439, 440
 Effects of
 changes in style lines, skirt, sleeves, waist, 10
 color, texture, luster on line, 29
 lines on the figure, 12
 Elasticity of fibers, 250, 251
 comparison of major fibers, 250, 251
 Embroidery, 228
 classification of, 232
 historic facts, 228
 stitches, 387, 388, 389, 399
 Emphasis defined, 12, 24
 Ensemble, 111, 139-212
 evaluation of, 218, 220
 to achieve style and taste, 32
 Epaulet sleeves, 170
 Ethics of shopping, 56
 Examiners of patterns, 101
 Exceptional facing, 415, 416
 Exclusive shops, 70
 Expenditures of family allowance, 54
 Extension closing, 410
 Eyes, range of colors, 31

 Fabric belt on skirt, 159, 189, 190, 457, 458
 Fabrics,
 ancient, 317
 care in stretching, 404
 children's garments, 365, 390
 evolution of, 317, 319
 for formal dress, 397
 for informal dress, 397-398
 history of, 323
 Middle Ages, 319
 modern, 319, 323
 nap, precautions in use, 124
 new fabrics, 323
 piecing of, 151
 Renaissance, 321
 selection of, 113-115, 219
 special treatment of, 400-401
 stitching of, 403, 404
 terms used to describe, 398
 width of, 146
 Faced sleeve opening, 185
 Facing a slashed neck opening, 176, 180
 Facings, 185, 266, 415-420
 Factors,
 affecting the selection of garments, 32
 affecting the service of garments, 46
 determining value of remodeling of garments, 224
 governing selection of accessories, 32-33
 Fad, 470
 Fading, 98, 257
 Fagoting, types of, 429
 Family incomes, different income levels, 487
 Fancy hems, 382
 Fashion,
 artist, 98
 changes in, 8, 13
 design, analysis of, 6, 8
 evolution of styles, 6, 8, 9
 points, 139
 shows, 71
 silhouettes, analysis of, 6, 8, 9
 Fasteners, in garment construction, 195, 362, 366
 Federal Trade Commission, 67, 85, 329
 Feel, comparative analysis of major fibers, 249
 Feel or texture of fabrics, 245-246
 Fell French seam, 372

- Felted fabrics, discovery of, 321
 Felting of fibers, 245, 246
 Fibers,
 analysis of, 74, 75
 properties of, 245
 Figure,
 analysis of, 4, 5
 average, characteristics of, 106
 distorted, 10, 17
 human, an illustration of fine
 spacing, 12, 14
 model measurements, 6
 Filet lace, 93
 Finishes for slashed neck opening,
 176, 180
 Finishing processes, 84
 surface decoration, 227, 228
 Fitted facing for sleeve opening,
 185, 186
 Fitting dresses, 160
 amount of necessary precau-
 tions, 161
 corrections after, 160, 165
 defined, 97
 grain line, position of, 161
 importance of correct fitting, 160
 marking armseye curve, 162, 163
 neckline curve, 161, 162
 preparations for, 157, 165
 skirt hanging of, 164
 sleeves, testing of, 167-170
 waistline, 164
 Fitting patterns, 103-105, 145
 Flannel,
 baby, 391
 canton, 354, 390
 placket, 375
 Flannelette, 391
 Flat fell seam, 372
 Flat knitting, 76 (See also "Knit-
 ting")
 Flat stitch embroidery, 232
 Flaws in fabrics, 147
 Flaxon, 391
 Fly shuttle, 317
 Folding of fabric, 123, 147, 148, 149
 Folds, 144
 plain, 380
 types of, 431-432
 Foot hemmer, 273
 Formal dress, selection of, 396, 397,
 398, 400
 Forms, combinations of, 30
 Forms of surface decoration, 231,
 239
 Foundation garments, 466
 Frames, weaving rug, 331
 French embroidery, 229, 233, 234
 French folds, 380, 432
 French seam, 371
 French shops, 70
 French silk, eighteenth century,
 229
 French tacks, 450, 451
 French Valenciennes lace, 93
 Full-fashioned hosiery, 67
 Fundamental structural lines, 141
 Fundamental types of construc-
 tion, 107, 140
 Gabardine, 391
 Galatea, 391
 Galoshes, 368
 Garment,
 cut on bias, 113
 label, 48, 262
 needs, factors determining, 40-
 42
 activities, 218
 environment and community
 needs, 40-42, 489-490
 income apportionment, 40, 487
 individual choice, 42, 486
 personal habits, special needs,
 41-44
 Gathering,
 gathered sleeve, 132-141
 gathering for fullness, 374
 gathers, stroking, 373-374
 hand, 373, 374
 machine, 283, 291, 300-302
 Gathers, use of, 157, 300-302, 373-
 374
 Gauge, use of, 173, 174, 408
 for cutting bias folds, 266
 measuring hems, 460
 measuring plaits, 289-292
 measuring tucks, 279-284, 303-
 304
 Gauze weave, 313
 General appearance, 219
 applied to selection, 145, 146
 German val lace, 93
 Gertrudes, 356
 Gingham effects, 312, 391
 Girls' clothing, 365-366
 Glove silk, advantages, 78-79
 Gloves, suggestions for buying, 481
 Gobelin tapestry, 343
 Godets, 461-463
 Good taste in dress, requirement
 of, 139

- Gores for fullness, 134
 Grader, 101
 Grades, standard of textiles, 262
 Grading defined, 97
 Grain of material, 144, 161, 262, 473
 checking of, in commercial patterns, 123, 124
 determining, 124, 149
 effect of darts on, 126
 effect on sleeves, 131
 influence on flares, 133
 straight of, 144
 Greek law of proportion, 12
 Greeks ancient, contribution to fabrics, 319
 Gros-point, 234
 Guide, use of, 296-297
 Gum, 80
- Habutae, 83
 Hair, color, 31
 Handkerchief linen, 391
 Handkerchiefs, 369
 Hardanger, 233
 Hargreaves, James, 316
 Harmony, 231, 291
 analogous, 28
 associated, 28
 contrasted, 28, 29
 defined, 21
 of lines, 20
 related, 28
 split complementary, 28, 29
 Harris tweeds, 347
 Hats,
 for children, 363, 369
 suggestions for selection, 480-481
 Heat conduction, comparison of major textiles, 250
 Hedebo, 233
 Hemmers, 273-278, 297-300
 Hems, 172-176
 binding, 175
 blind, 407, 408
 children's garments, 380-383
 collars, 183
 faced, 176
 fancy, 382-383
 heavy fabrics, 174
 machine sewing of, 273-278, 297-300
 marking, 122, 141, 153, 460
 overcasting, 383
 picot-stitched, 409
 pin, 409
 pinking, 175
- Hems—*Continued*
 placket, 185, 374, 375
 rolled, 175-176, 382, 383, 409
 sheer fabrics, 407-409
 shell edge, 381, 382
 shrinking out fullness in, 174
 skirt, 122, 141, 164, 165, 173, 460
 sleeve opening, 184, 185
 slip stitching, 174
 use of gauge, 173-174
 wrist, 185
 Hemstitching, 347, 406
 High standards, value of, 216, 217
 High style models, 471
 Hindus, development of ancient fabrics, 318, 320
 Hips, alteration for, 121
 Historical development of fabric decoration, 227
 History of silk, 74-75, 80-89
 Home Economics Department of U. S. Government, study of score cards, 220
 Hooks and eyes, 195, 196, 362
 Hosiery, 77
 Hour-glass figure, 11
 Hue, 261 (See also "Color")
 Human figure,
 classification of, 4
 structural analysis of, 4
 variations of, 3
 unit, a, 3
- Identifying right and wrong side of fabric, 400-401
 Illusion, creating of, in dress, 3
 Illustrator, 100
 Imitation French seam, 405
 Imitation of structural design, by surface methods, 228
 Income,
 division of, 487-489
 varying levels of, 487-488
 Indian head, 391
 Individual coloring, types of, 30
 Individual needs, of wardrobe, 39-40
 Individual scores, 223
 value of, 224
 Individuality in dress, 475-476
 Informal dress, 396-469
 Inside belt, 458
 Insoluble dyes, uses of, 256
 Inspection of fabric, 147
 Instalment buying, 60 (See also "Budget buying")

- Intensity of color, 27
 Interlined collar, 450
 Inventory of clothing, 492-494
 suggested outline, 37
 Inverted plaits, 463-464
 Iridescent silks, 83
 Irish lace, 93-94
 Ironing, 207-212
 board, 207
 steam, 209
- Jackets, hipline, effects of length, 16
 Jacquard appliance, 317
 Jacquard mechanism, 326, 332
 Jacquard weave, 312-313
 Japanese fabrics, contribution by, 318
 Jersey, 391
 Jersey fabrics, 76-77
 Jewelry, selection of, 481-482
 Joining bias strips, 266
 Judging garments, standards for, 215-224
 Junior miss, defined, 102
- Kimono, baby's, 358
 Kimono sleeves, 168, 169
 Knitted goods, 76
 Knitting, 76-79
 weaving compared, 76-77
 netting, knotting, 76
 Knotting, 76
- Labels, defined, 62
 Lace, 89-94, 345
 appliqué of, 433
 invention of, 321
 Ladies' size of pattern, defined, 102
 Lapped, placket, 186, 455-457
 Lapped seams, 372
 Lawn, Persian, 392
 Laying out material for cutting, 123, 124
 Laying pattern on fabric, 124
 Layout expert, 391
 Leg-of-mutton sleeve, 132, 140
 Length of fibers, 245, 246, 249
 Length of skirt, aids in adjusting, 180, 181
 Lengthwise fold (thread), 123, 144
 Lengthwise and crosswise folds, 123
 Line, 231
 effect of, 12, 106, 113-115
 horizontal, 16, 231
- Line—*Continued*
 meaning of, 231
 vertical, 231
 Line effect of, difference in color, texture, luster, 29
 Linen, 212, 391
 Lines in harmony with structure of body, 8
 List for shopping, value of, 56, 57
 Loading of silk (weighting), 84, 476
 Long bias, 412
 Loops,
 blind, 195
 flat, 197
 fastening, 195, 200
 Luster of fibers, 245, 246
- Machine attachments, 265-309
 Singer, 199, 265-295, 306
 Willcox and Gibbs, 296-305
 Maltese lace, 93
 Manufacture of cloth, 83, 251, 253
 Marking hemline of a circular skirt, 122
 Marking plaits, 143
 Materials, how to select, 113-115
 Measurements, comparison with normal figure, 4-6
 Measurements of pattern, how to take, 103, 142-143
 Mechlin lace, 93
 Mending, darning, replacing holes, 344
 Mercerization, 236
 Merchandise,
 classes of, 61
 delivery of, 58
 devices, special, 67
 Mesh, 92
 Metallic, weighted silk, testing of, 477
 Methods of establishing standards for evaluation of garments, 215-216
 Methods of folding bias strips, 380
 Methods of testing patterns, 145
 Metropolitan Museum of Art, decorated tapestries, 229
 Milanese (glove silk), 78
 Milliner's fold, 432
 Millinery (See "Hats")
 Mirror, full length, 4
 Misses' sizes, defined, 102
 Model figure, proportions of, 6
 Model maker, 100

- Mohair, 247
 Moiré, 237
 Moisture content, comparison, major fibers, 250
 Mordant dyes, uses of, 255
 Motifs,
 requirements for good design, 314
 used in fabric design, 231
 Moth, silk, 81
 Mules, 316-317
- Nainsook, 391
 Napping, 236
 Natural dyes, uses, 255
 Naturalistic design, 230
 Necessity for training in use of money, 54
 Neckline finishes, 108, 178-180
 cowl 130, 426
 Needle guard (machine), 306
 Needle-point, 234
 lace, 76, 92, 93, 315
 Needles and thread, correct use of, 170, 171
 Netting, 76, 315
 Norwegian embroidery, 232
 Notches,
 cutting, 151
 marking, 144, 152
 Novelty weaves, 313
- Occasion as a factor in dress selection, 48
 Occult balance, 18, 22, 231
 One-piece sleeve, 187
 One-piece tailored opening, 186
 Open band cuff, 188
 Open-work embroidery, 233, 234
 Opposition, rhythm by, 22, 23, 231
 Optical illusion, 3, 12
 Orderliness and care of clothing, 46, 393
 Organdy, 290, 314, 392, 404
 Organzine, 80, 82
 Oriental rugs, 335-337
 Oriental textiles, 320, 321
 Osnaburgs, 237
 Outing flannel, 392
 Outline for pattern study, 143
 Outline stitch, 387, 388
 Outside belt, 189, 190
 Overcasting,
 both directions, children's garments, 383
 buttonholes, 377
- Overcasting—*Continued*
 cross-double, 434
 seams, 172, 439, 440
- Panties, 364, 366
 rubber, for baby, 358
 Patterns,
 adaptation, 126, 137
 commercial, use of, 96, 97
 cost of, 142
 how to obtain correct size, 112
 making, 97
 placing pattern on fabric, 401, 402, 436
 symbols for joining, 144
 Percalé, 392
 Percentage of total income apportioned for clothing, 487, 489
 Percentage, use of in scoring, 216
 Perching, 344
 Perforations, 144, 152
 Persian lawn, 392
 Persian rugs, 336, 337
 Personal shopping, 71
 Peruvian embroidery and textiles, 229
 Petit-point, gros-point, 234
 Phthalic anhydrid dye, uses, 256
 Photographs of figure, for figure analysis, 4
 Pick, 332
 Picot hems, 409
 Picot seam, 406
 Pierced cocoons, use of, 81
 Pile crushing, rugs, 339
 Pin hem, 409
 Pinking, 175
 Pinning garment, precautions, 124, 140, 150
 Piping, 424, 425
 corded, facing, 425
 Piqué, 392
 Pitch, 333
 Placing pattern, pinning, cutting garment, 401, 402, 436
 Plackets,
 baby's dress, 374-375
 for side opening of dress, 192, 193, 428
 for side seam of sheer fabrics, 428
 for skirts, 455-457
 one-piece tailored, 186
 requisites of, 190-191
 two-piece tailored, 187
 under a plait or tuck, 457

- Plaids,
 and large checks, precautions,
 124, 312
 and stripes, how to match, 125,
 312
 variety of lines, 24
 Plain seam with edges bound, 440,
 441
 Plaits, 157, 164, 403, 463-465
 by machine, 289-292
 pressing, 210
 section of skirt, 463-465
 Plan of work, value of, 399
 Planning the clothing budget, 493
 Plans for spending the clothing al-
 lowance, 486
 Playsuits, 363
 Plisse, 236, 237
 Plush, cotton, 315
 Pockets,
 bound (set in), 445-447
 patch, 378, 379
 Poplin, 312, 392
 Popular style, 47
 Pounding block, 208
 Preparation for cutting fabric, 123,
 147-151
 Presser foot, 267, 273, 280, 286, 292,
 295, 298, 300, 305
 Pressing, 207-212
 Price groups, factors controlling,
 47
 Price of clothing, defined, 48
 Principles of hygiene, 218
 Print, 392
 Printing, direct or roller, 259
 Production of silk, 80, 81
 Prominent abdomen, alteration
 for, 103
 Properties,
 of fibers, 245-246
 of silk, 74
 Proportion in dress and acces-
 sories, 14, 16, 33
 Purchasing fabrics and garments,
 cautions, 49
 Pure-dye silk, 67, 85, 476-477
 metallic weighted silks, com-
 pared, 477
 Purpose or use, first consideration,
 482

 Qualities of fabrics due to char-
 acteristics, 251
 Quality of garments,
 defined, 467, 468

 Quality of Garments—*Continued*
 in judging the construction of a
 dress, 50
 Quarter, unit of loom width, 333
 Quilting, 233, 234, 434
 technique, 235
 Quilts, 235

 Raglan sleeve, 110, 140, 169, 353,
 356, 358, 361, 363, 367, 369
 Raw silk, 82
 Rayon, 249-255, 478, 479
 Receding, retiring colors, 26
 Reeling of silk, 82
 Related color schemes, 28
 Relating current styles to indi-
 vidual figure, 8
 Relationship,
 between customers and sales-
 people, 55
 of store to community, 60, 61
 Remodeling garments, 204, 207,
 224, 225
 Renaissance fabrics, 321, 322
 Renovation of fabrics, 206, 207
 Repair of clothing, 490
 Repetition, rhythm by, 21
 Repp fabrics, 311, 315
 Resist printing, 260
 Restraint,
 in choice of colors, 29
 in decorative design, 8
 in selection of accessories, 32,
 33
 Retail store, 54, 60, 61
 Revers, 130, 442
 Rhythm, 12, 22, 23, 231
 Ribbons, history of, 75
 Ring spinning, 316, 317
 Rolled hem, 383, 409
 Roller printing, 237
 Roman, ancient fabrics, 319
 Rompers, 357-358
 Round-shouldered, 141
 Rounded back and flat chest, al-
 terations for, 118, 162
 Ruffler, 284-292
 Ruffles, 284, 289, 303
 making by machine, 284-289,
 302-303
 Rugs and carpets, 323-342
 Rules for contest for judging gar-
 ments, 221
 Running stitch hem, 382
 Russian embroidery, 232
 Russian interlaced stitches, 431

- Safety, precautions in using the sewing machine, 306-308
- Sales, types of, 65
- Saleswoman's duties, 56
- Samples, requests for, 57
- Sateen, 315
weave, 312
- Scale of living, 489, 490
- Scallops, 271, 424
binding of, 422
- Score cards, 215, 220, 222-224
- Screen printing, 261
- Scrim, 315
- Seamless rugs, 333
- Seams,
allowance for, 151, 152
bound, 439, 440
construction of, 171, 371, 405
durable, well-finished, 479, 480
finishes,
hemstitched, 406
piecings, 479, 480
plain, 371
rolled, 406
silk fabric, 171, 172
suits and coats, 439-441
slot, 440, 441
- Seasonal sales, 65
- Seersucker, 392
- Selection of appropriate fabric for coats, 435
- Selection of appropriate patterns for type of coat, 435
- Selection of coats, principles applied to, 470-474
- Self-analysis of individual figure, 4, 5
- Selvages, 123, 144, 149
- Serge, 76, 77, 314
- Services afforded by stores, 48, 67, 68, 70
- Sewing machines, attachments for, Singer, 265-296, 306
Willcox and Gibbs, 296-307
- Shading, rugs, 333
- Shadowgraphs, 4
- Shaped facing for slashed neck opening, 177-178
- Shearing, 236
- Shearing rugs, 333
- Sheen type of rugs, 333
- Sheer fabrics, 403-409, 427, 428
- Shell edge, 381, 382
- Shirred cording, 293
- Shirring, 128
hand, 383, 384, 432, 433
- Shirring—*Continued*
machine, 283, 302, 303
- Shorts, adjusting for length, 121
- Shot weft threads, 334
- Shoulder style lines, 110
- Shrinkage of fabrics, 370, 435-436
shrinking fullness in hem, 174
- Side plaits, 465
- Silhouette, 139, 140
changes, 10
examination to determine changes, 138, 140, 141
fashion, 8-13
use of, to determine type of figure, 5
- Silk, 476-479
characteristics of good silk dresses, 476
chrysalides, 81
chrysalis, 80
cocoons, 80, 81
cultivation, 80, 81
comparative study, 245-262
composition, 80
construction of garment, 141
degumming, 84
designs, 229
differentiation of from cottons, woolens, synthetics, 81, 82, 245-262, 478-479
doupions (double cocoons), 81
doubling and twisting, 82
dyeing, 83, 84 (See also "Dyeing")
finishing, 84
factors influencing use, 89
grain of, 144
gum, 80
history of, 80
importance of, 74
making silk cloth, 83
manufacture of yarns, 83
moth, 81
numbering raw silk, 82
organzine, 82
pierced cocoons, 81
pressing, 209, 210
production, 80, 81
properties of, 74
raw, 80-82
reeling, 82
sales, 262
silkworm, 80
singles, 83
spun or waste, 85
standards for selection, 476

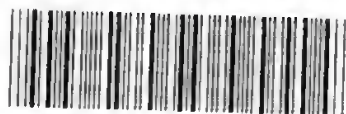
- Silk—Continued**
 storing of eggs, 81
 throwing, 82
 tram, 82
 ungummed, 85
 weaves, 75
 weighting, 84, 85, 477
 wild (Tussah), 80
 yarn, 83
Silkalene, 315
Silk satin, 315
Size of pattern, 102, 112 (See "Alteration of commercial pattern")
Size of stitch, regulating, 170
Sizing, 236
Skein-dyed, 334
Skin tones, 29, 30
Skirt,
 adaptation, 121, 133-136
 circular, 122, 164
 construction of, 455
 gored, 134
 hanging the, 164, 459
 lines, 141
Sleeves,
 alteration, 120
 construction, 159
 finishes for wrists, 184, 189
 precautions in cutting, 150
 two-piece, 438-439
 types of, 110, 131, 132, 139, 140
 bishop, 131, 140
 cape, 132
 elbow-length, 364
 epaulette, 170
 kimono, 140, 168, 169
 leg-of-mutton, 132, 140
 one-piece, 187
 raglan, 110, 140, 169
Slide fasteners (zippers), 194, 197, 198, 293, 411, 412
Slip-stitching, 174, 407, 408
Sloped shoulders, alteration for, 119
Slot seam, 440-441
Smartness and distinction in an ensemble, 217
Smocking, 157, 384-387
Snail shirring, 433
Snaps, 196, 197, 457
Soiesette, 392
Special attachments, list of, 295
Special sales, 65, 69
Specialty shops, 70
Spending plan of family, 486
Spinning, 252, 316, 317
Sport suits or coats, 435
Spun silk, 85
Square neckline, 418
Square shoulders, alteration for, 119
Standards,
 evaluation, setting up, 215, 224
 family, 489, 490
 living, effect of clothing needs, 40
 practicing thrift, 44
 purchase of a dress, 47, 52, 475, 482
 selecting materials, 47
 selecting ready-made garments, 215, 225, 474, 482
 weaves, 472, 473
Staple, 334
Staple styles, 47
Stay edges, importance of, 155, 204
Steam pressing iron, 209
Stencil dyeing, 238
Stitches,
 basting, 158-159, 408
 blind hemming, 173, 175, 407, 408
 buttonhole, 376, 444
 catch-, 175, 387
 decorative, 233-234, 384-389, 429-434, 449-451
 gathering, 374
 hemming, 173
 loop, 196, 381
 machine, 265-307
 overcasting, 172, 376, 390
 running, 389, 407, 409
 slip, 174, 404, 408
Stock dyed, 339
Stockinette, 354, 392
Store, department, 57, 61, 63, 70, 71
Straight band cuff, 188
Straightening ends of fabric, 148
Strength of fibers, 250
Stripes, 125, 312
Structural designs, 6, 8, 227, 310-313
Structure of fibers, 245, 246
Study of fabrics, 231
Stuffer, 334
Style,
 designing, to accord with fashion trends, 106
 lines, effect on figure, 12, 106, 111
 of coats, discrimination in buying, 470, 471

Style—Continued

- shows, for evaluation of garments, 215
- Suitability to style, 396
- Suits, 435-466
 - pressing, 212
- Sulphur dyes, 255
- Summer garments, 361
- Sunsuits, 361-362
- Surface designs, 227, 236, 239
- Sweaters, 369
- Swedish embroidery, 233
- Symbols for joining patterns, 144
- Symmetrical balance, 18
- Synthetic fabrics, 478, 479
- Systematic planning for clothing, 485, 486
- Tacks, bar, 449
- Tailor basting, 152, 153
- Tailor chalk, value of, 154, 155
- Tailor tacking, 152, 153
- Tailored coats and suits, 435
- Tailored collars with band, 184, 185
- Tailored placket, 455
- Tailor's cushion, 208
- Tapestry, 315
 - crewel embroidery, and, 234
 - history of, 342, 343
- Testing measurements, 145
- Testing patterns, 144, 145, 436
- Textile facts in buying cloth, 261, 262 (See also "Fabrics")
- Textile printing, 258, 261
- Textile testing, value of, 62, 63
- Texture, 245, 254, 398
- Theory of color, 26
- Thrift in dress, 44
- Throwing silk, 82, 312
- Tie dying, 239
- Tinsel, 247
- Torchon lace, 93
- Tracing wheel, 153
- Trade-marks, 61, 62
- Tram, 82
- Transition of lines, 23 (See also "Rhythm")
- Trapunto, technique of, 235
- Tricot, 76 (See also "Glove silk")
- Trimmings for formal and informal dress, 429, 430, 431, 434
- Trousers for boys, 367, 368
- Tube trimming, 294-295, 432
- Tuck seam, 440, 441
- Tucker, use of, 279-284, 303-304
- Tucks, 156, 402
- Tufting, 236
- Turned in seam, 405
- Twill weave, 75, 312
- Two-piece placket for front of waist, 187, 188
- Tyrolean embroidery, 232
- Types of clothing, 393
- Types of forms, 5
- Ultra styles, 47
- Underarm seams, 158
- Undergarments, 364, 375, 466
- Unity in plan for accessories, 467
- Unlabeled products, 61, 62
- Use of paper in stitching sheers, 404
- Use of pattern outline, 143
- Use of score cards for evaluation, 216
- U-shaped neckline, 419, 420
- Values,
 - definite plan for systematic buying, 485, 486
 - in dress, defined, 48
 - of fabrics, psychological, 314
 - of fibers for textile purposes, 245
 - of learning to evaluate, 215, 224
 - of testing patterns, 142
- Variations in human forms, 3, 6
- Vat dyes, uses, 255, 256
- Velour, 315
- Velvet, 86, 315
 - rugs, 326-327, 329, 334
- Venetian point, 93
- Voile, 392
- V-shaped neckline, 129, 418
- Waist,
 - adaptation, 126-128
 - styles, 107
- Waistline placing, 141
- Wardrobe,
 - how to invoice, 36, 37
 - individual classification, 42-44
- Warm and cold colors, 26
- Warp, 334
 - knitting, 78 (See "Knitting")
- Waterproofing, 84
- Wearing apparel classification, 37
- Weaves,
 - characteristics, 477 (See also "Fabrics")
 - novelty, 75

- Weaves—*Continued*
 plain, 310, 311, 312
 twill, 312
Weaving, 76, 77, 317-337, 342-343
 hand, 335, 342, 347
 reweaving, 344
Weighting silk, 84, 85, 476, 477
Welt pocket, 445, 446
Welt seam, 440, 441
Wheels, spinning, 316
Whipping, 383 (See also "Over-casting")
Wilton rugs, 326-329, 334
Winter garments, 362
Wire board for pressing velvet, 208
Wise choice of fabrics, 145
Wool carpet, production, 335
Woolen fabrics, 257, 423, 435, 440, 472
 mixtures, 253, 355, 472
Workmanship,
 construction, 219, 473, 474
 defined, 48
Worsted, woolens, comparison of, 472, 473
Wrist finishes, 185
Yarns, 322
 silk, 83
 strength of, 252
Yokes,
 blouses, 115, 140
 skirts, 157
Zigzag stitch, 354
Zigzagger, 278
Zipper placket, use of,
 applied by machine, 293
 front closing, 197, 198, 411
 side closing, 194, 412
 without seams, 411-412

89058797028



B89058797028A

y be kept

FOURTEEN DAYS

be stamped below. A fine of TWO CENTS
and for each day the book is kept over time.

CONSALUS, & others

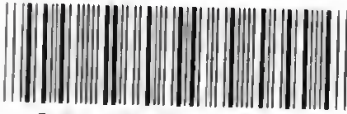
REYQ
.C76

Distinctive cloths

LIBRARY
COLLEGE OF AGRICULTURE
UNIVERSITY OF WISCONSIN

MADISON

89058797028



B89058797028A

y be kept

FOURTEEN DAYS

be stamped below. A fine of TWO CENTS
ad for each day the book is kept over time.

CONSALUS, & others

REYQ
.C76

Distinctive cloths

LIBRARY
COLLEGE OF AGRICULTURE
UNIVERSITY OF WISCONSIN
MADISON

89058797028



b89058797028a